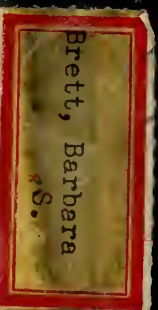




AM
1941
bre





BOSTON UNIVERSITY

GRADUATE SCHOOL

Thesis

THE BEGINNINGS OF HARMONY IN THE WORKS OF
DUFAY AND HIS PREDECESSORS

by

Barbara Sturtevant Brett

(B.S., Skidmore College, 1939)

submitted in partial fulfillment of
the requirements for the degree of

Master of Arts

1941^{mw}



Am
1941
bre

Approved

by

First Reader. *Raymond C. Robinson*

Professor of

Second Reader. *Alfred Meyer*

Professor of

OUTLINE

Page

INTRODUCTION

Music -- a Fine Art

Definition of Harmony

Approximate Beginning of Harmony; Date

Purpose of Study

Importance of Illustrations

Method of Presentation

PART I

I. ANCIENT MUSIC IN THEORY AND PRACTISE

A. ANCIENT GREEK MUSIC

1

1. Diversity of Opinions

2. Theory of Coussemaker

3. Finding from Plato

4. Pythagoras

B. ANCIENT ROMAN MUSIC

6

1. Greek influence

2. Comparison of Roman and Greek

Temperament

3. Degeneration of Music and the Arts

C. EARLY CHRISTIAN MUSIC

9

1. Music, the Appropriate Vehicle

for Religious Expression

1880

1880

1880

1880

1880

1880

1880

1880

1880

1880

1880

1880

1880

1880

1880

1880

1880

1880

1880

1880

1880

1880

2. St. Ambrose
3. Pope Gregory
4. The Venerable Bede
5. Isidor of Seville
6. Aurelien de Reome
7. Religious Music of 7th and 8th
Century

II. THE BEGINNING OF HARMONY IN DIAPHONY

A. HUCBALD 15

1. Organum
2. Diaphony
3. Origin of Consecutive 5ths in
Part Work

B. GUIDO d'AREZZO 19

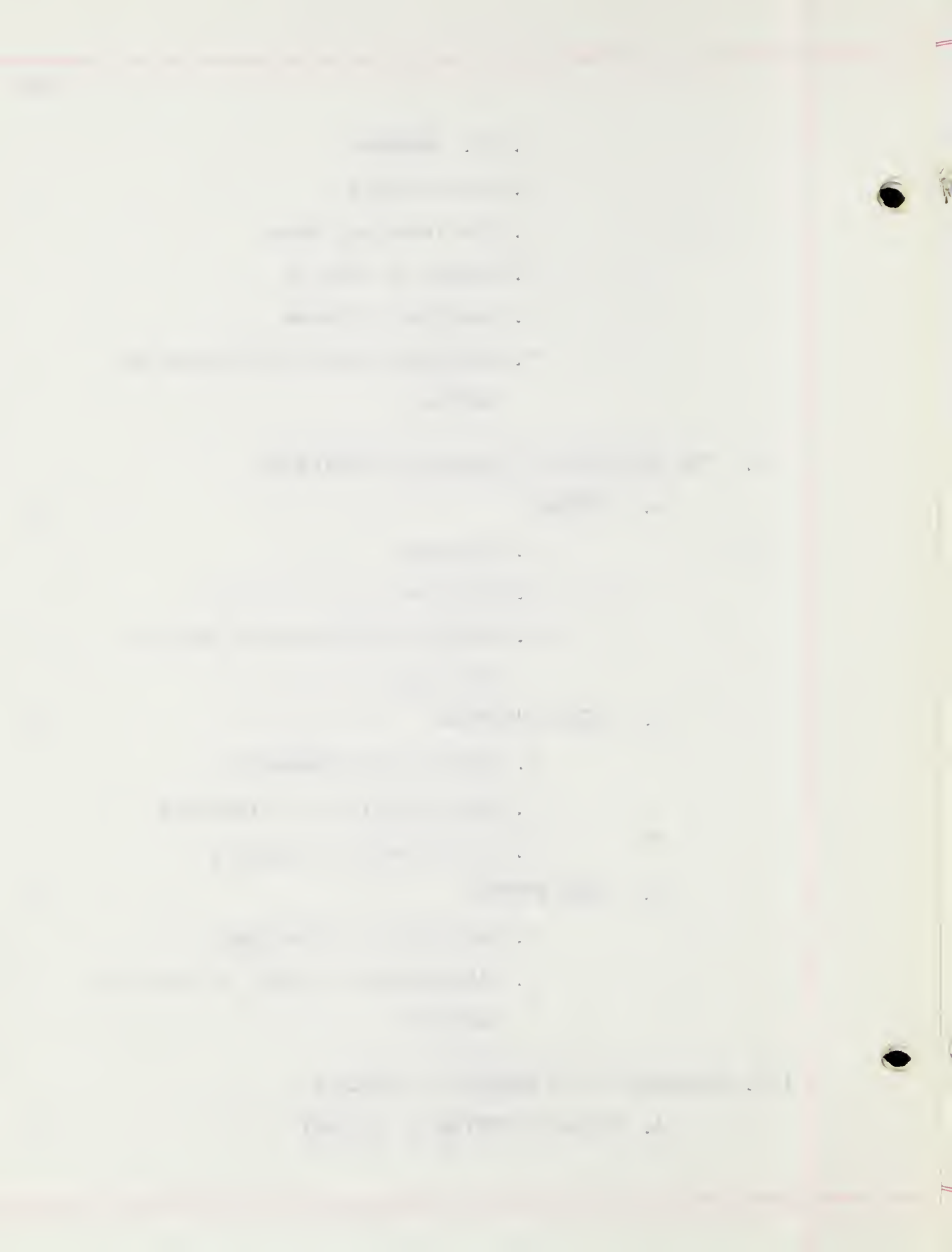
1. Definition of Diaphony
2. Classification of Intervals
3. Improvement in Diaphony

C. JEAN COTTON 20

1. Definition of Diaphony
2. Diaphony at the Half of the 11th
Century

III. PROGRESSION OF HARMONY IN DISCANT

A. CHARACTERISTICS OF DISCANT 22



1. Origin of Word	
2. Definitions	
a. Coussemaker	
b. Franco of Cologne	
c. Jean de Muris	
B. EARLY WRITERS ON DISCANT	23
1. Egidius de Murino	
2. Jerome de Moravie	
a. Contents of Cpt. 26 of Treatise	
3. Gui de Chalis	
C. 12th CENTURY DISCANT	25
1. Fifth document from Coussemaker	
2. Sixth Document	
IV. EARLY SECULAR MUSIC	
A. COMPOSERS OF NATURAL SONGS	27
1. Contribution to Music History	
2. Compared with Church Music	
B. TROUBADOURS, TROUVERES, MINNESINGERS	27
1. National Characteristics	
2. Origin of Music	
C. DIFFERENTIATING FACTORS	29
1. Tonality	
2. Use of Harmony	
3. Variety of Folk Song Forms	

Dec 9, 1960

Monday

October 1

Nov 12, 1960

Friday

Nov 13, 1960

Saturday

Nov 14, 1960

Nov 15, 1960

Sunday

Nov 16, 1960

Nov 17, 1960

Nov 18, 1960

Nov 19, 1960

Nov 20, 1960

Nov 21, 1960

Nov 22, 1960

Nov 23, 1960

Nov 24, 1960

Nov 25, 1960

Nov 26, 1960

Nov 27, 1960

Nov 28, 1960

Nov 29, 1960

Nov 30, 1960

D.	A FEW KNOWN TROUVERES	Page 31
	1. Gillon Ferrant	
	2. Jehan de la Fontaine	
	3. Moniot d'Arras	
	4. Moniot de Paris	
	5. Le Prince de la Moree	
	6. Thomas Herriers	
E.	THE GREATEST TROUVERE, ADAM DE LA HALE	32
	1. Modern Idea of Tonality	
	2. Forms employed	
	a. Rondel	
	b. Motet	
F.	SUMMARY OF SECULAR CONTRIBUTIONS	33
V.	THE FRENCH SCHOOL	
A.	MUSIC AN ACCEPTED FIELD OF STUDY	35
B.	POLYPHONIC PERIOD	35
	1. Importance of Harmonic Aspect	
	2. Forms Employed	
C.	FIRST PERIOD (1100 to 1140 A.D.)	37
	1. Leonin	
	2. Perotin	
D.	SECOND PERIOD (1140 to 1170 A.D.)	37
	1. Robert de Sabillon	
	2. Pierre de la Croix	
	3. Jean de Garlande	
	4. Aristote	

1	Introduction	1
2	Chapter 1: The History of the Book	2
3	Chapter 2: The Structure of the Book	3
4	Chapter 3: The Language of the Book	4
5	Chapter 4: The Style of the Book	5
6	Chapter 5: The Content of the Book	6
7	Chapter 6: The Audience of the Book	7
8	Chapter 7: The Purpose of the Book	8
9	Chapter 8: The Impact of the Book	9
10	Chapter 9: The Future of the Book	10
11	Chapter 10: The Conclusion of the Book	11
12	Appendix A: The Bibliography	12
13	Appendix B: The Glossary	13
14	Appendix C: The Index	14
15	Appendix D: The List of Figures	15
16	Appendix E: The List of Tables	16
17	Appendix F: The List of Equations	17
18	Appendix G: The List of References	18
19	Appendix H: The List of Abbreviations	19
20	Appendix I: The List of Symbols	20
21	Appendix J: The List of Acronyms	21
22	Appendix K: The List of Initials	22
23	Appendix L: The List of Suffixes	23
24	Appendix M: The List of Prefixes	24
25	Appendix N: The List of Postfixes	25
26	Appendix O: The List of Infixes	26
27	Appendix P: The List of Circumfixes	27
28	Appendix Q: The List of Reduplication	28
29	Appendix R: The List of Compounding	29
30	Appendix S: The List of Derivation	30
31	Appendix T: The List of Inflection	31
32	Appendix U: The List of Syntax	32
33	Appendix V: The List of Semantics	33
34	Appendix W: The List of Pragmatics	34
35	Appendix X: The List of Phonetics	35
36	Appendix Y: The List of Phonology	36
37	Appendix Z: The List of Morphology	37
38	Appendix AA: The List of Lexis	38
39	Appendix AB: The List of Onomastics	39
40	Appendix AC: The List of Etymology	40
41	Appendix AD: The List of Philology	41
42	Appendix AE: The List of Linguistics	42
43	Appendix AF: The List of Language	43
44	Appendix AG: The List of Communication	44
45	Appendix AH: The List of Information	45
46	Appendix AI: The List of Knowledge	46
47	Appendix AJ: The List of Wisdom	47
48	Appendix AK: The List of Understanding	48
49	Appendix AL: The List of Intelligence	49
50	Appendix AM: The List of Reason	50
51	Appendix AN: The List of Logic	51
52	Appendix AO: The List of Philosophy	52
53	Appendix AP: The List of Science	53
54	Appendix AQ: The List of Technology	54
55	Appendix AR: The List of Art	55
56	Appendix AS: The List of Literature	56
57	Appendix AT: The List of Music	57
58	Appendix AU: The List of Dance	58
59	Appendix AV: The List of Theater	59
60	Appendix AW: The List of Film	60
61	Appendix AX: The List of Television	61
62	Appendix AY: The List of Radio	62
63	Appendix AZ: The List of Internet	63
64	Appendix BA: The List of Social Media	64
65	Appendix BB: The List of Mobile Phone	65
66	Appendix BC: The List of Computer	66
67	Appendix BD: The List of Software	67
68	Appendix BE: The List of Hardware	68
69	Appendix BF: The List of Network	69
70	Appendix BG: The List of Database	70
71	Appendix BH: The List of Cloud	71
72	Appendix BI: The List of Big Data	72
73	Appendix BJ: The List of Artificial Intelligence	73
74	Appendix BK: The List of Robotics	74
75	Appendix BL: The List of Nanotechnology	75
76	Appendix BM: The List of Biotechnology	76
77	Appendix BN: The List of Space Technology	77
78	Appendix BO: The List of Environmental Technology	78
79	Appendix BP: The List of Medical Technology	79
80	Appendix BQ: The List of Agricultural Technology	80
81	Appendix BR: The List of Industrial Technology	81
82	Appendix BS: The List of Transportation Technology	82
83	Appendix BT: The List of Energy Technology	83
84	Appendix BU: The List of Materials Technology	84
85	Appendix BV: The List of Information Technology	85
86	Appendix BW: The List of Communication Technology	86
87	Appendix BX: The List of Media Technology	87
88	Appendix BY: The List of Entertainment Technology	88
89	Appendix BZ: The List of Consumer Technology	89
90	Appendix CA: The List of Business Technology	90
91	Appendix CB: The List of Finance Technology	91
92	Appendix CC: The List of Marketing Technology	92
93	Appendix CD: The List of Sales Technology	93
94	Appendix CE: The List of Customer Relationship Management Technology	94
95	Appendix CF: The List of Human Resources Technology	95
96	Appendix CG: The List of Operations Technology	96
97	Appendix CH: The List of Supply Chain Technology	97
98	Appendix CI: The List of Logistics Technology	98
99	Appendix CJ: The List of Procurement Technology	99
100	Appendix CK: The List of Project Management Technology	100
101	Appendix CL: The List of Risk Management Technology	101
102	Appendix CM: The List of Compliance Technology	102
103	Appendix CN: The List of Governance Technology	103
104	Appendix CO: The List of Leadership Technology	104
105	Appendix CP: The List of Management Technology	105
106	Appendix CQ: The List of Organization Technology	106
107	Appendix CR: The List of Strategy Technology	107
108	Appendix CS: The List of Innovation Technology	108
109	Appendix CT: The List of Research and Development Technology	109
110	Appendix CU: The List of Quality Management Technology	110
111	Appendix CV: The List of Continuous Improvement Technology	111
112	Appendix CW: The List of Lean Manufacturing Technology	112
113	Appendix CX: The List of Six Sigma Technology	113
114	Appendix CY: The List of Total Quality Management Technology	114
115	Appendix CZ: The List of Kaizen Technology	115
116	Appendix DA: The List of Agile Technology	116
117	Appendix DB: The List of DevOps Technology	117
118	Appendix DC: The List of Waterfall Technology	118
119	Appendix DD: The List of Spiral Model Technology	119
120	Appendix DE: The List of V-model Technology	120
121	Appendix DF: The List of X-model Technology	121
122	Appendix DG: The List of S-model Technology	122
123	Appendix DH: The List of W-model Technology	123
124	Appendix DI: The List of H-model Technology	124
125	Appendix DJ: The List of I-model Technology	125
126	Appendix DK: The List of R-model Technology	126
127	Appendix DL: The List of N-model Technology	127
128	Appendix DM: The List of D-model Technology	128
129	Appendix DN: The List of B-model Technology	129
130	Appendix DO: The List of G-model Technology	130
131	Appendix DP: The List of F-model Technology	131
132	Appendix DQ: The List of E-model Technology	132
133	Appendix DR: The List of C-model Technology	133
134	Appendix DS: The List of K-model Technology	134
135	Appendix DT: The List of L-model Technology	135
136	Appendix DU: The List of M-model Technology	136
137	Appendix DV: The List of P-model Technology	137
138	Appendix DW: The List of Q-model Technology	138
139	Appendix DX: The List of R-model Technology	139
140	Appendix DY: The List of S-model Technology	140
141	Appendix DZ: The List of T-model Technology	141
142	Appendix EA: The List of U-model Technology	142
143	Appendix EB: The List of V-model Technology	143
144	Appendix EC: The List of W-model Technology	144
145	Appendix ED: The List of X-model Technology	145
146	Appendix EE: The List of Y-model Technology	146
147	Appendix EF: The List of Z-model Technology	147
148	Appendix EG: The List of AA-model Technology	148
149	Appendix EH: The List of AB-model Technology	149
150	Appendix EI: The List of AC-model Technology	150
151	Appendix EJ: The List of AD-model Technology	151
152	Appendix EK: The List of AE-model Technology	152
153	Appendix EL: The List of AF-model Technology	153
154	Appendix EM: The List of AG-model Technology	154
155	Appendix EN: The List of AH-model Technology	155
156	Appendix EO: The List of AI-model Technology	156
157	Appendix EP: The List of AJ-model Technology	157
158	Appendix EQ: The List of AK-model Technology	158
159	Appendix ER: The List of AL-model Technology	159
160	Appendix ES: The List of AM-model Technology	160
161	Appendix ET: The List of AN-model Technology	161
162	Appendix EU: The List of AO-model Technology	162
163	Appendix EV: The List of AP-model Technology	163
164	Appendix EW: The List of AQ-model Technology	164
165	Appendix EX: The List of AR-model Technology	165
166	Appendix EY: The List of AS-model Technology	166
167	Appendix EZ: The List of AT-model Technology	167
168	Appendix FA: The List of AU-model Technology	168
169	Appendix FB: The List of AV-model Technology	169
170	Appendix FC: The List of AW-model Technology	170
171	Appendix FD: The List of AX-model Technology	171
172	Appendix FE: The List of AY-model Technology	172
173	Appendix FF: The List of AZ-model Technology	173
174	Appendix FG: The List of BA-model Technology	174
175	Appendix FH: The List of BB-model Technology	175
176	Appendix FI: The List of BC-model Technology	176
177	Appendix FJ: The List of BD-model Technology	177
178	Appendix FK: The List of BE-model Technology	178
179	Appendix FL: The List of BF-model Technology	179
180	Appendix FM: The List of BG-model Technology	180
181	Appendix FN: The List of BH-model Technology	181
182	Appendix FO: The List of BI-model Technology	182
183	Appendix FP: The List of BJ-model Technology	183
184	Appendix FQ: The List of BK-model Technology	184
185	Appendix FR: The List of BL-model Technology	185
186	Appendix FS: The List of BM-model Technology	186
187	Appendix FT: The List of BN-model Technology	187
188	Appendix FU: The List of BO-model Technology	188
189	Appendix FV: The List of BP-model Technology	189
190	Appendix FW: The List of BQ-model Technology	190
191	Appendix FX: The List of BR-model Technology	191
192	Appendix FY: The List of BS-model Technology	192
193	Appendix FZ: The List of BT-model Technology	193
194	Appendix GA: The List of BU-model Technology	194
195	Appendix GB: The List of BV-model Technology	195
196	Appendix GC: The List of BW-model Technology	196
197	Appendix GD: The List of BX-model Technology	197
198	Appendix GE: The List of BY-model Technology	198
199	Appendix GF: The List of BZ-model Technology	199
200	Appendix GG: The List of CA-model Technology	200
201	Appendix GH: The List of CB-model Technology	201
202	Appendix GI: The List of CC-model Technology	202
203	Appendix GJ: The List of CD-model Technology	203
204	Appendix GK: The List of CE-model Technology	204
205	Appendix GL: The List of CF-model Technology	205
206	Appendix GM: The List of CG-model Technology	206
207	Appendix GN: The List of CH-model Technology	207
208	Appendix GO: The List of CI-model Technology	208
209	Appendix GP: The List of CJ-model Technology	209
210	Appendix GQ: The List of CK-model Technology	210
211	Appendix GR: The List of CL-model Technology	211
212	Appendix GS: The List of CM-model Technology	212
213	Appendix GT: The List of CN-model Technology	213
214	Appendix GU: The List of CO-model Technology	214
215	Appendix GV: The List of CP-model Technology	215
216	Appendix GW: The List of CQ-model Technology	216
217	Appendix GX: The List of CR-model Technology	217
218	Appendix GY: The List of CS-model Technology	218
219	Appendix GZ: The List of CT-model Technology	219
220	Appendix HA: The List of CU-model Technology	220
221	Appendix HB: The List of CV-model Technology	221
222	Appendix HC: The List of CW-model Technology	222
223	Appendix HD: The List of CX-model Technology	223
224	Appendix HE: The List of CY-model Technology	224
225	Appendix HF: The List of CZ-model Technology	225
226	Appendix HG: The List of DA-model Technology	226
227	Appendix HH: The List of DB-model Technology	227
228	Appendix HI: The List of DC-model Technology	228
229	Appendix HJ: The List of DD-model Technology	229
230	Appendix HK: The List of DE-model Technology	230
231	Appendix HL: The List of DF-model Technology	231
232	Appendix HM: The List of DG-model Technology	232
233	Appendix HN: The List of DH-model Technology	233
234	Appendix HO: The List of DI-model Technology	234
235	Appendix HP: The List of DJ-model Technology	235
236	Appendix HQ: The List of DK-model Technology	236
237	Appendix HR: The List of DL-model Technology	237
238	Appendix HS: The List of DM-model Technology	238
239	Appendix HT: The List of DN-model Technology	239
240	Appendix HU: The List of DO-model Technology	240
241	Appendix HV: The List of DP-model Technology	241
242	Appendix HW: The List of DQ-model Technology	242
243	Appendix HX: The List of DR-model Technology	243
244	Appendix HY: The List of DS-model Technology	244
245	Appendix HZ: The List of DT-model Technology	245
246	Appendix IA: The List of DU-model Technology	246
247	Appendix IB: The List of DV-model Technology	247
248	Appendix IC: The List of DW-model Technology	248
249	Appendix ID: The List of DX-model Technology	249
250	Appendix IE: The List of DY-model Technology	250
251	Appendix IF: The List of DZ-model Technology	251
252	Appendix IG: The List of EA-model Technology	252
253	Appendix IH: The List of EB-model Technology	253
254	Appendix II: The List of EC-model Technology	254
255	Appendix IJ: The List of ED-model Technology	255
256	Appendix IK: The List of EE-model Technology	256
257	Appendix IL: The List of EF-model Technology	257
258	Appendix IM: The List of EG-model Technology	258
259	Appendix IN: The List of EH-model Technology	259
260	Appendix IO: The List of EI-model Technology	260
261	Appendix IP: The List of EJ-model Technology	261
262	Appendix IQ: The List of EK-model Technology	262
263	Appendix IR: The List of EL-model Technology	263
264	Appendix IS: The List of EM-model Technology	264
265	Appendix IT: The List of EN-model Technology	265
266	Appendix IU: The List of EO-model Technology	266
267	Appendix IV: The List of EP-model Technology	267
268	Appendix IW: The List of EQ-model Technology	268
269	Appendix IX: The List of ER-model Technology	269
270	Appendix IY: The List of ES-model Technology	270
271	Appendix IZ: The List of ET-model Technology	271
272	Appendix JA: The List of EU-model Technology	272
273	Appendix JB: The List of EV-model Technology	273
274	Appendix JC: The List of EW-model Technology	274
275	Appendix JD: The List of EX-model Technology	275
276	Appendix JE: The List of EY-model Technology	276
277	Appendix JF: The List of EZ-model Technology	277
278	Appendix JG: The List of FA-model Technology	278
279	Appendix JH: The List of FB-model Technology	279
280	Appendix JI: The List of FC-model Technology	280
281	Appendix JJ: The List of FD-model Technology	281
282	Appendix JK: The List of FE-model Technology	282
283	Appendix JL: The List of FG-model Technology	283
284	Appendix JM: The List of FH-model Technology	284
285	Appendix JN: The List of FI-model Technology	285
286	Appendix JO: The List of FJ-model Technology	286
287	Appendix JP: The List of FK-model Technology	287
288	Appendix JQ: The List of FL-model Technology	288
289	Appendix JR: The List of FM-model Technology	289
290	Appendix JS: The List of FN-model Technology	290
291	Appendix JT: The List of FO-model Technology	291
292	Appendix JU: The List of FP-model Technology	292
293	Appendix JV: The List of FQ-model Technology	293
294	Appendix JW: The List of FR-model Technology	294
295	Appendix JX: The List of FS-model Technology	295
296	Appendix JY: The List of FT-model Technology	296
297	Appendix JZ: The List of FU-model Technology	297
298	Appendix KA: The List of FV-model Technology	298
299	Appendix KB: The List of FW-model Technology	299
300	Appendix KC: The List of FX-model Technology	300

	Page
E. THIRD PERIOD (1170 to 1230 A.D.)	38
1. Franco of Paris	
2. Franco of Cologne	
3. Jerome de Moravie	
F. FOURTH PERIOD (1230 to 1370 A.D.)	39
1. Phillippe de Vitrey	
2. Jean de Muris	
3. Guillaume de Machaut	
G. DECLINE OF FRENCH SCHOOL	41
1. Abuse of Liberties Allowed	
2. Summary of Contributions	
VI. ENGLISH MUSIC	
A. EARLY HISTORY	43
1. Lack of Available Material	
2. Part Singing	
3. Augustine's Mission (596)	
4. Reading Rota	
a. The Form	
b. The significance	
B. EARLY THEORISTS	45
1. Walter Odington	
2. Simon Tunsted	
3. Jean de Muris	
4. John Torksey	
5. Robert Handle	
6. Thomas Walsingham	

1. The first part of the document is

the introduction.

The second part is

the main body of the document.

2. The second part of the document is

the main body of the document.

The third part is

the conclusion of the document.

The fourth part is

the final part of the document.

The fifth part is

the final part of the document.

The sixth part is

the final part of the document.

The seventh part is

the final part of the document.

The eighth part is

the final part of the document.

The ninth part is

the final part of the document.

The tenth part is

the final part of the document.

The eleventh part is

the final part of the document.

The twelfth part is

the final part of the document.

The thirteenth part is

the final part of the document.

7. Lionel Power	
8. Theinred	
C. DUNSTABLE -- THE FIRST RECOGNIZED MUSICIAN	47
1. Place in History	
2. Importance of Compositions	
D. SIGNIFICANCE OF EARLY ENGLISH MUSIC	48
VII. THE GALLO-BELGIC SCHOOL	
A. IMMEDIATE PRECURSORS OF DUFAY	49
1. Zeelandia -- Only Known Facts	
B. GUILLERMUS DUFAY	50
1. Biography	
2. Contributions to Musical Art	
C. BINCHOIS (GILLE DE BINCH)	54
1. Biography	
2. Contributions	
D. MUSIC AT THE HALF OF THE 15th CENTURY	54
PART II	
I. Explanation of Procedure	55
II. Examples and Analysis	59
III. Digest	83
IV. Bibliography	88

INTRODUCTION

Music was the last branch of art to be studied and developed. Sculpture, poetry, painting, and the drama had progressed through many centuries of development before serious interest was shown in music. A possible explanation may lie in the fact that before the advent of Christianity, the various religions practised likened their Gods to the living. First animal and then human forms were attributed to Deities. The literary and plastic arts served admirably in religious expression. Human forms attributed to the Greek Gods and Goddesses were ideal subjects for sculptors and dramatists, and poets lent their command of language to the description of the same. Although the theoretical study of music interested many, its actual practise remained secondary to poetry and drama for years. With the advent of Christianity a new art was needed. The God of the Heavens could not be adequately suggested by sculptors or Dramatists. The church leaders desiring not only to avoid any possible surgestion of Pagan practises, but also to express spiritual things, found a perfect medium in music. As their religion became more firmly established, attention could be given to improving the religious service. Monks and ecclesiastics directed their attention to the study

and practise of music. A fresh interest in secular music was also awakened. Both the religious, and secular elements therefore developed music to an artistic level. At first each progressed separately but gradually the secular crept into the ecclesiastical field. Finally music became an art in its own right, not the slave of drama, poetry, or religion. Music was studied and composed for its own sake.

We are concerned with one of the most important elements in music -- harmony. It is indispensable in our modern western music. A single melody might be compared to one line in art; a mere suggestion of the total potentialities therein.

In considering the development of harmony, the first step should be its definition. From this, an approximate date as to its actual beginning may be deducted.

From The International Cyclopedia of Music and Musicians the following definition is taken. "Harmony is in general any agreeable combination of tones -- a simultaneous sounding of two or more tones, in contradiction to sounding one tone after another in melodic sequence." In the same article C. H. Kitson defines harmony as "the scientific combination of two or more sounds." The Oxford Companion to music says, "Harmony may be described as clothing a melody, the voices or parts that accompany the chief one inevitably produce among themselves a succession of chords. It is this chordal

aspect of the combination of voices or parts which is properly described as the element of harmony." In the Macmillan Encyclopedia of Music and Musicians, "Harmony is the simultaneous sounding of two or more tones: Technically speaking, harmony is the formation of chords and their relationship to one another." According to the Encyclopedia Britannica "Harmony applies to a pleasing combination of musical sounds. Technically it is confined to the science of the combination of sounds of different pitch."

These definitions are all fairly similar. They differ in two respects. In some cases harmony appears to be haphazard in its nature; in others it is considered the result of a scientific, controlled, purposeful procedure. Secondly, in only two of these definitions is an aesthetic consideration included. That is, its immediate effect on the listener. The best possible definition would include both these requirements. The Encyclopedia Britannica also says that by means of harmony music has attained the dignity of an independent art. All the Fine Arts are governed by similar principles. They express in their form some orderly, universal law either directly or by suggestion. These universal principles are the permanent, worthwhile aspects of life. Despite all else they continue steadfastly and changelessly. In recognition of these principles human beings gain faith and see the beauty of life in the world. The purpose of Fine Art is to contin-

ually bring to humanity a revelation of the fundamental and real values in the world. Only through an orderly process can the greater order of the universe be intimated. Whatever the art may be therefore, its expression must be logical and controlled, its every part contributing to the final effect. Each unnecessary word in a poem, line in a picture, or note in a composition detracts that much from a final desired effect. Harmony, in so much as it is a major tool in musical art, must therefore be an intellectual, technical study, the actual development of which did not begin until it was purposefully considered.

Secondly, the truly great works of art reach down to the third level of our consciousness and make lasting impressions there. The first level is the emotional, the second the intellectual, and the third the social or spiritual level. It is by experiences on this third level that we are able to live the finer, most satisfying lives, and we are able to have such experiences through fine art. The medium used for expression by the artist therefore must be clear, vital, and satisfying to the participant. A confused, vague, or inharmonious work serves only to evoke a response of dissatisfaction and irritation. Harmony within reason should be acceptable to the listener if the music is to accomplish its purpose as an art. Admittedly, music has a somewhat more difficult problem than

the other arts in its process of development. The human ear is a particularly sensitive organ, responsive to the slightest change. However, despite this handicap music has gradually developed into an important field of the Fine Arts. The term Harmony is, then, applied to a pleasantly stimulating combination of tones, subject to technical, logical regulations.

In looking for the date of the beginning of harmony, we do not expect to find the ideal fulfillment of this definition; but rather the germ of its development. This we find in the 9th century in Hucbald; not in his organum of consecutive fifths, but in his diaphony, which is varied to be more interesting and stimulating, yet which proceeded under very strict rules. In considering the definition again we find that Hucbald was also concerned with both pleasing the listener and controlling his method. His results, to be sure, were far removed from those accepted today, but the aim was similar, and with this idea in mind musical development was insured. The many possibilities of the "Music of simultaneous sounds" gradually unfolded under the arduous labors of the old Masters.

The purpose of this thesis is to clarify and coordinate the background of harmonic music. For a thorough understanding of any art, it is necessary to probe into its beginnings to discover the whys, hows, and wherefores of its existence. Obsolete as many of the old methods and products may seem,

it is interesting from a purely intellectual standpoint to realize that some of the ancient methods are still in use today. Many of the chants, modal melodies, and masses of our churches are taken directly from music of the old masters.

Music historians do include this period in their writings, some briefly, others more inclusively. However, these are written in the majority of cases from the historical point of view. In addition, what we found of the actual harmonic development was extremely broken up and piecemeal.

We shall attempt to separate the historical facts from the harmonic to clarify the development of harmony itself. The best books on this subject to our knowledge are by Coussemaker in the French language. Copies of his books are rare, however, due to a limited number of editions. It seems to us that even in his volumes the harmonic development is somewhat obscured by historical data and facts, besides several diversions in the form of debates with authors of varying opinions on the same subject. The fine examples which he discovered are in each case gathered together in the final section of the book with no further explanations than what is to be found in preceding chapters.

In regard to the examples, we found very few books which stressed their importance. Without doubt, they offer the very best possible method of understanding that period first-hand.

It is important that a good foundation be laid for the child's future development. The child's mind is like a blank slate, and it is up to the parent to fill it with the right information. The child's mind is like a blank slate, and it is up to the parent to fill it with the right information.

The child's mind is like a blank slate, and it is up to the parent to fill it with the right information. The child's mind is like a blank slate, and it is up to the parent to fill it with the right information. The child's mind is like a blank slate, and it is up to the parent to fill it with the right information.

The child's mind is like a blank slate, and it is up to the parent to fill it with the right information. The child's mind is like a blank slate, and it is up to the parent to fill it with the right information. The child's mind is like a blank slate, and it is up to the parent to fill it with the right information.

The child's mind is like a blank slate, and it is up to the parent to fill it with the right information. The child's mind is like a blank slate, and it is up to the parent to fill it with the right information. The child's mind is like a blank slate, and it is up to the parent to fill it with the right information.

The child's mind is like a blank slate, and it is up to the parent to fill it with the right information. The child's mind is like a blank slate, and it is up to the parent to fill it with the right information. The child's mind is like a blank slate, and it is up to the parent to fill it with the right information.

The child's mind is like a blank slate, and it is up to the parent to fill it with the right information. The child's mind is like a blank slate, and it is up to the parent to fill it with the right information. The child's mind is like a blank slate, and it is up to the parent to fill it with the right information.

In order to know a poet or philosopher, one reads his works; in studying architecture one goes to the actual buildings for facts, and so in music, whenever possible the music should be carefully analyzed. Due to Coussemaker's research we now have many manuscripts with examples which fill in the hitherto serious gaps in the musical history of the middle ages. In consideration of this he says, "We cannot call too much attention to these original monuments -- because, in the same way the history of our national architecture of the middle ages finds itself in written specimens on the cathedrals, the abbeys, the village inn, and other buildings, both secular and religious -- so the history of music possesses these same characteristics, the true ones to be found in the melodies, motets, and songs of all the people. For the most part these have been in the shelves of libraries up to now. It is necessary to hunt them up, to publish them, and it is by them that we can acquire a true conception of the art."

We first present, therefore, the musical history of the period with which we are dealing: and secondly, a comprehensive study of the harmonic development of the music of the same period. In this way we hope to clarify the development of music as an art, and add to the comprehension of modern music and its study.

PART I.

I. ANCIENT MUSIC IN THEORY AND PRACTISE

In discussing the music of the ancients we find that Greek music is something of a problem. There are very few actual examples left to us, and those, for the most part are fragmentary and unsatisfactory. From ancient works of art and poetry we are able to deduct much concerning the methods of the music itself, although there seems to be considerable diversity of opinion.

From Grove's dictionary we learn that "The Greeks were theoretically conscious of the mathematical relations on which certain harmonious conceptions can be made to rest, but it does not appear that they actually used these discoveries for artistic purposes. Albert Lavignac in his "Music and Musicians" says "It is odd to think that among the Greeks, at a time when other arts attained greatest heights, music was still in its infancy. They knew neither harmony nor even melody as we conceive it" ---- "music was the humble slave of poetry ----" apparently music was never separated from poetry and was always considered the lesser art. He continues -- "It always seems amazing that a people with highly developed artistic sense in other fields, had double flutes, trumpets, harps, and lyres of many strings, yet never thought of producing two tones at once, that they never stumbled on harmony and followed its possibilities as an art. "Furthermore they

were music conscious for over nearly 1300 years prior to Christianity.

Coussemaker, on the other hand, brings forth evidence that the Greeks knew and understood harmony. He states as a certainty that they knew the music of simultaneous sounds, but that this harmony was limited. True, the Greeks used the word harmony in a different sense than we do; in a much broader, more general way. This is what composed Greek harmony: When a melody was sung by many voices by the same timbre it was sung in unison. This was "homophony". If the voices were of different timbre, the melody was sung in octaves; this was "antiphony". Singing in fourths or fifths was called "paraphony". Regarding these three consonances, the 4th and 5th were not enjoyed or sung in concert, according to Aristotle. Later though, according to Coussemaker, in Plutarch's time it was said that the vocal and instrumental symphonie had made some progress because then the 4th and 5th were enjoyed and sung. This was in the 1st century of our time, more than three centuries after Aristotle. There is a passage in "Plato's Laws" which seems to support the Contention that the Greeks did know harmony and practise it. It says "diversity of notes, when strings give one sound and the composer or poet another; also when they make concords and harmonies in which lesser

and greater intervals, slow and quick, or high and low notes are combined." This is a difficult passage to rationalize for those who deny that the Greeks had any knowledge of harmony. It would seem logical to believe that they did practise harmony to some extent, but with the Romans victorious, all the arts came to a standstill and even degenerated, as we shall see, with the Fall of Rome.

The known facts about Greek Music however, are well worth considering. Nauman in his History of Music, Vol. I, relates many Greek myths and historic instances in which music played an important part. Everyone knows the myth of the Sirens and the dire effect their seductive music had on many a sailor. It is easily proved that the Greeks had a keen appreciation of music and of its powers, and ascribed to it various powerful influences on the mind and soul. Pythagoras is probably the most important figure in Greek music history. His findings influenced music throughout the middle ages, and even today music is based on his mathematical discovery. He founded the system representing the mathematical relation of one tone to another. By means of a box with strings and a movable bridge, he established the Ratio of the tonic as to the octave as 1:2 -- the tonic to its fifth, as 2:3 etc. The Pythagoreans are fine examples of what music meant to many Greeks. To them number was the

symbol of the germ of creation. They symbolized this by a well tuned Lyre. They believed that harmonious music, sweet melody alone, could restore peace and balance to the mind and world. Aristotle and Plato also wrote along the same vein. The affect of music was so great and overwhelming that they recommended particularly careful choice of it in education lest youth's morals be corrupted.¹

First the Greek scale should be considered. This generally extended about three octaves, corresponding to vocal limits. They had many modes, each being divided into two tetrachords (four-tone scales), and each consisting of a different order of steps and half steps. At first there were two common known, the Dorian and Phrygian (the oldest); subsequently there were seven and later even more. Each scale was spoken of as having its own appropriate use such as for tragedy, sorrow, love or grief. There were also three tonal systems, the diatonic, enharmonic, and chromatic, easily recognized by different grouping within the tetrachord.

The history of ancient Greek music may be said to have come to an end in 150 A.D. at the death of Nicomachus, a disciple of the Pythagorean School.

1. Emil Naumann, The History of Music (1887), Vol. I, p. 139.

The Greeks exemplify the fact that the development of tonal art is closely and inevitably connected with civilization. While Greece was advancing the tonal art expanded and developed, but music declined along with culture and morals. We will find this to be also true in Roman history.¹

1. Emil Naumann, The History of Music (1887), Vol. I, p. 157.

Music in Italy seems to have amounted to little until after the conquest of Greece in the 2nd century B.C. Greek art and artists were spread in every direction. Roman arts and education came to be directed nearly exclusively under Greek teachers. It later became fashionable to study under foreign or imported scholars and teachers.¹ One might expect music to continue its development with renewed vigor, but this was not the case. In dealing with the Romans we have a much different temperament with which to cope, -- "While the Greeks maintained a marvelous equilibrium between idealism and realism, with the Romans the latter conception largely preponderated." Whereas the Greeks placed first among their deities Appollo, Aphrodite, and the Muses, the Romans considered Mars far superior to any other. The Greek's adoration of the beautiful became in the Roman merely a love of the real and visible. The Romans were content with an imitation of the genuine art which was the Greeks' greatest pleasure. The Greek had loved passionately his liberty, while the Roman allowed his to be restricted. Music finds its development more in the imaginative, emotional, intangible realm whereas the Romans found their existence in sacrifice of all to the impersonal state, governed by rigid

1. Waldo Selden Pratt, The History of Music (1935), p. 59.

rules, with no room for the mysterious mystical elements conducive to a creative art such as music.¹

The Romans seemed to care more about performing music than creating it.² Both emperors Nero and Commodus are said to have enjoyed performing, although very poorly, for hours at a time, -- severe punishment being given those appearing uninterested or bored.³

There are two ways in which the Romans kept alive the art of music, and contributed to its development: first, their delight in hearing technically skilled musicians resulted in numerous contests to which artists came from far and wide to display their skill and win coveted prizes. Secondly, Greek students and scholars were attracted to Rome, thus spreading the knowledge of Greek styles and forms into the west.⁴

The status of music did not compare, however, with what it had been in Greece. With the beginning of the decline of Rome the tonal art fell rapidly, being reduced to the vainest subjectivity. Love for the Beautiful gave way to a craving for the sensual and music became the servant of luxurious and passionate licentious revelry.

1. Emil Nauman, The History of Music (1887), p. 159.

2. Bauer and Peyser, How Music Grew (1939), p. 43.

3. Joseph Bird, The History of Music (1850), p. 66.

4. Waldo Selden Pratt, The History of Music (1935), p. 58.

The Musical theory of the Roman was of course based on that of the Greeks, although it developed more independently than the other arts. About 50 A.D. the Romans introduced into their scale, the major 3rd, an interval which the Greeks had considered a dissonance. This revised scale might be considered the forerunner of our diatonic scale.

There are three names worthy of consideration as writers on the practise and theory of the tonal art, Vitruvius, Macrobius and Boethius. The latter (6th century B.C.) wrote a treatise on the Greek modes, "De Musica". As presented there, the Modes were destined to form the basis of the future Christian Church Music.

Roman culture fell so low in all respects that it had to be left to some other faction to give new life to the progress of the arts to encourage its further development. The heathen and classical ages had contributed to the full extent of their ability, and could do no more.¹

1. Emil Naumann, The History of Music () Vol. I, p. 165.

The first part of the paper is devoted to a general discussion of the problem of the existence of solutions of the system of equations (1) for arbitrary values of the parameters $\alpha, \beta, \gamma, \delta, \epsilon, \zeta, \eta, \theta, \iota, \kappa, \lambda, \mu, \nu, \xi, \omicron, \pi, \rho, \sigma, \tau, \upsilon, \phi, \chi, \psi, \omega, \varphi, \eta, \theta, \iota, \kappa, \lambda, \mu, \nu, \xi, \omicron, \pi, \rho, \sigma, \tau, \upsilon, \phi, \chi, \psi, \omega, \varphi$. It is shown that the system of equations (1) has solutions for arbitrary values of the parameters $\alpha, \beta, \gamma, \delta, \epsilon, \zeta, \eta, \theta, \iota, \kappa, \lambda, \mu, \nu, \xi, \omicron, \pi, \rho, \sigma, \tau, \upsilon, \phi, \chi, \psi, \omega, \varphi$ if and only if the conditions (2) are satisfied. The conditions (2) are necessary and sufficient for the existence of solutions of the system of equations (1) for arbitrary values of the parameters $\alpha, \beta, \gamma, \delta, \epsilon, \zeta, \eta, \theta, \iota, \kappa, \lambda, \mu, \nu, \xi, \omicron, \pi, \rho, \sigma, \tau, \upsilon, \phi, \chi, \psi, \omega, \varphi$.

The second part of the paper is devoted to a detailed analysis of the system of equations (1) for arbitrary values of the parameters $\alpha, \beta, \gamma, \delta, \epsilon, \zeta, \eta, \theta, \iota, \kappa, \lambda, \mu, \nu, \xi, \omicron, \pi, \rho, \sigma, \tau, \upsilon, \phi, \chi, \psi, \omega, \varphi$. It is shown that the system of equations (1) has solutions for arbitrary values of the parameters $\alpha, \beta, \gamma, \delta, \epsilon, \zeta, \eta, \theta, \iota, \kappa, \lambda, \mu, \nu, \xi, \omicron, \pi, \rho, \sigma, \tau, \upsilon, \phi, \chi, \psi, \omega, \varphi$ if and only if the conditions (2) are satisfied. The conditions (2) are necessary and sufficient for the existence of solutions of the system of equations (1) for arbitrary values of the parameters $\alpha, \beta, \gamma, \delta, \epsilon, \zeta, \eta, \theta, \iota, \kappa, \lambda, \mu, \nu, \xi, \omicron, \pi, \rho, \sigma, \tau, \upsilon, \phi, \chi, \psi, \omega, \varphi$.

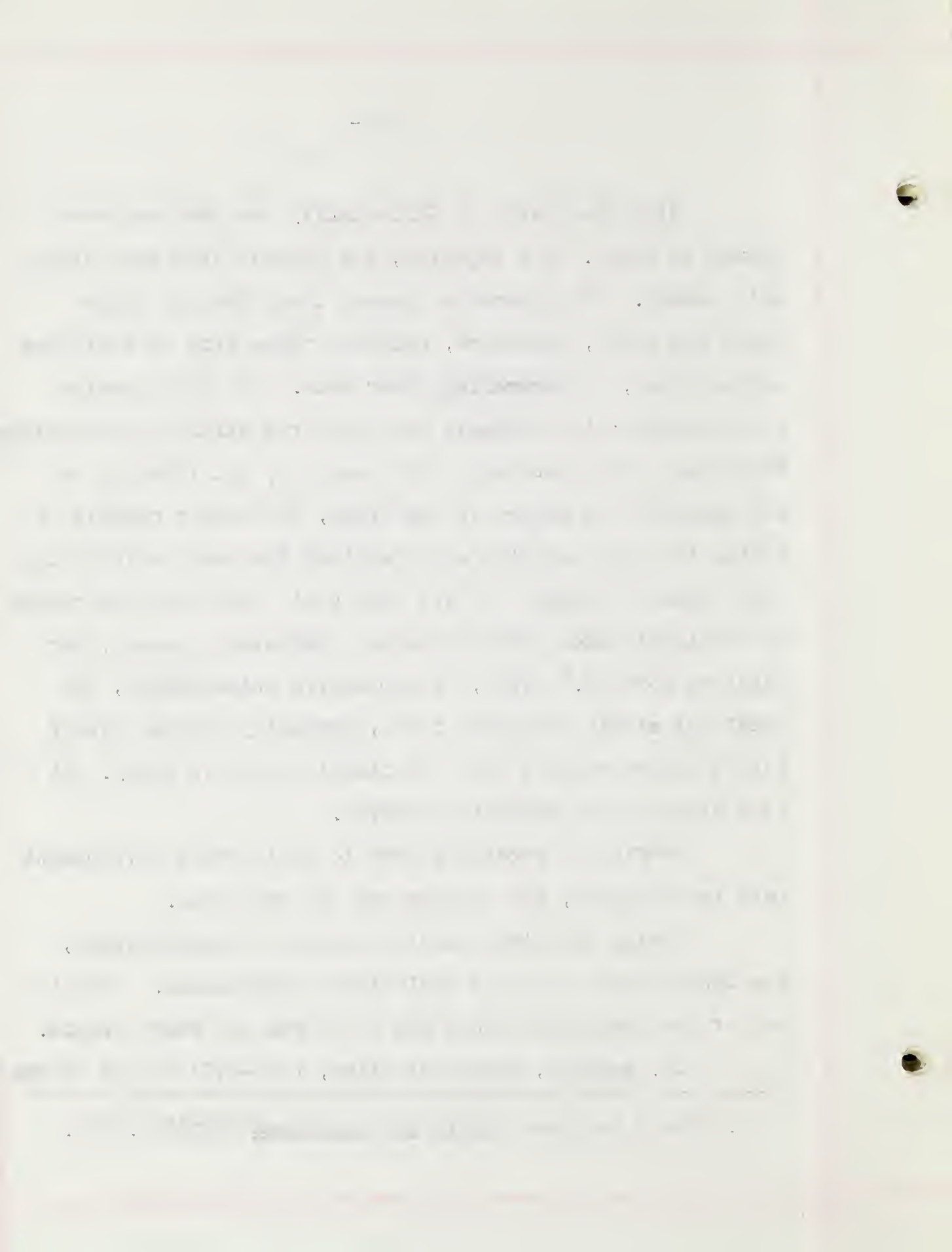
With the advent of Christianity new horizons were opened in Music. For Paganism, the plastic arts had served well enough. Its adherents likened their Gods to human forms and could, therefore, dedicate their arts of sculpture and painting, to portraying their Gods. But Christianity was different; its emphasis was away from earthly human things. There was a dire necessity for a new art, not inferior to and dependent on poetry or the drama, but rather capable of ruling the soul and mind and elevating the human spirit high above worldly thoughts; an art that could soar into the realms of the ideal which words could not adequately suggest, nor painting portray.¹ Thus, from relative unimportance, the tonal art slowly struggles forth, gradually forming itself into the pure exalted music we finally reach in Dufay. It is a slow painful awakening however.

We find it necessary here to divide this development into two branches, the secular and the religious.

During the first eight centuries of Christianity, the Church Chant remained exclusively homophonous. The oldest of the Christian chants are of Hebrew and Greek origin.

St. Ambrose, Bishop of Milan, (340-397) is one of the

1. Albert Lavignac, Music and Musicians (1903) p. 387.



first known to work out a firm foundation for church music. He preserved four of the Greek modes, later called the "authentic modes". These were the Dorian, Phrygian, Lydian, Mixolydian.¹ These do not coincide with the Greek names of the same scales, however. The names became mixed because the Greeks used the terms "high and low" in a sense directly opposite to modern usage. i.e. in tuning their lyre they used the word "high" where we would use "low". St. Ambrose felt it necessary to make changes in Church Music because at that time secular tunes were creeping into the Church service and robbing it of much of its dignity.² We find that throughout church music history, secular music is always trying to make itself heard and continually has to be "put back in line". The old ecclesiastics refused to allow secular influences to corrupt the church. Harmony, such as it was, having begun outside the church, was not recognized by them for many years.

Concerning church music again, the next important steps were the addition of four Amrosian modes and four plagal modes, each authentic mode having its plagal, beginning a 4th below its own "do".

Pope Gregory established the "Schola Cantorum", a

-
1. Albert Lavignac, Music and Musicians (1903), p. 388.
 2. Bauer and Peyser, How Music Grew (1939), p. 71.

school of singing at Rome. He trained the singers and attempted to establish a systematic way of singing for all Christian Churches. Actual performance of Church Music apparently attained more dignity and became more appropriate to religious ceremony. Before that time it was regarded as a sort of stunt at the end of which the congregation waved its handkerchiefs if they enjoyed the performance! There are many things Pope Gregory did for church music. He did nothing for harmony, however. Music still held to a single melodic line. His many achievements along other musical lines all served to raise the general standard of music as an art. The Gregorian Chant which he perfected gained world wide recognition. Benedict Biscop came from England to receive instructions that he might carry it back to his country.¹

About this time there lived a man in England called the Venerable, so loved and respected was he by all. Of music he says, "Music is the most worthy, courteous, pleasant, joyous, and lovely of all knowledge; it makes a man gentlemanly in his deameanor, pleasant, courteous, joyous, lovely, for it acts upon his feelings. Music encourages us to bear the heaviest afflictions, administers consolation in every difficulty, refreshes the broken spirit, removed headache,

1. Bauer and Peyser, How Music Grew (1939), p. 75.

and cures crossness and melancholy." This statement might well be written by a modern psychologist concerning the possibility of musical treatments in mental cases today. The Venerable Bede used the Gregorian Plain Chant, and it spread all over England, thus adding dignity and beauty to the Church service. Also due to his love of music, whenever a monastery sprang up, a music school too was founded.¹

Leaving church music for a while, we find that the oldest historic document on harmony of the middle ages is found in the "Sentences sur la musique" by Isidore of Seville, Bishop of Seville,--born in Cartagena 570 --died April 4, 636.

"Harmonic music" he says, "is a modulation of the voice; it is also a concord of many sounds and their sounding together. It would not seem that he uses the word harmony in the modern sense anymore than did the Greeks. His use of the term is almost identical with that which the Greeks used to designate melody.

Aurelien de Reome, the first author to write on music following Isidor, began by dividing music into harmonic, rhymic, and metric. Concerning the harmonies, he said that the low sounds united with the high sounds produced a simultaneous assembling of voices. Remi d'Auxerre, who came at the first part of the 9th century defined harmony as "a consonance and a simultaneous reunion of the voices".

1. Bauer and Peysen, How Music Grew (1939), p. 76.

To return to Isidor, there is then the sense of "harmonic music" which he fixed. It is music of simultaneous sounds. He also said "the symphony is the accord of low and high sounds either in voices or instruments. Discords were then called diaphony, symphony being the opposite of diaphony which was composed of discordant or dissonant voices. Isidor counts only five symphonies as concord, -- the 8va, 4th, 5th, 8va and 5th, double 8va; whereas Cassiodore and others of the middle ages count six -- those above plus the 8va and 4th. These were the only thoughts on music of simultaneous sounds before the 7th century and these were more theorized about than practised.

During the 7th and 8th centuries music theory made little progress to our knowledge. Religious chants, however, were greatly developed by the Church and there would seem to have been progress made due to the fact that in the 9th century harmony was allowed in the papal chapel, and there were some rules governing its use. This is attested to by the Monk of Angoulême. He said that Roman chants give their art of organization to the French, -- that is, the art of accompanying a melody by another part, vocal or instrumental, called organum.¹

1. Coussemaker, Histoire de l'Harmonie au Moyen Age (1852, p. 11.

At the beginning of the 9th Century harmony becomes more generally accepted and used than previously. The rules then existing are unknown, however. This is not the very first use of part singing. We have spoken of it before. Also if the Church finally accepted it we can be fairly sure it had been experimented with and used for some time previously. The church is well known for its reluctance to try anything new or unproven.

The first part of the paper is devoted to a discussion of the
general principles of the theory of the structure of the
crystal lattice. In the second part, the results of the
calculations are presented. The third part is devoted to a
discussion of the results of the calculations. The fourth part
is devoted to a discussion of the results of the calculations.
The fifth part is devoted to a discussion of the results of the
calculations. The sixth part is devoted to a discussion of the
results of the calculations. The seventh part is devoted to a
discussion of the results of the calculations. The eighth part
is devoted to a discussion of the results of the calculations.
The ninth part is devoted to a discussion of the results of the
calculations. The tenth part is devoted to a discussion of the
results of the calculations. The eleventh part is devoted to a
discussion of the results of the calculations. The twelfth part
is devoted to a discussion of the results of the calculations.
The thirteenth part is devoted to a discussion of the results of the
calculations. The fourteenth part is devoted to a discussion of the
results of the calculations. The fifteenth part is devoted to a
discussion of the results of the calculations. The sixteenth part
is devoted to a discussion of the results of the calculations.
The seventeenth part is devoted to a discussion of the results of the
calculations. The eighteenth part is devoted to a discussion of the
results of the calculations. The nineteenth part is devoted to a
discussion of the results of the calculations. The twentieth part
is devoted to a discussion of the results of the calculations.

II. THE BEGINNING OF HARMONY IN DIAPHONY

As we see it, harmony and its actual development began with Hucbald, -- not through organum which was merely a doubling of certain voices to strengthen the melody and accommodate the different vocal ranges, but rather with the beginning of diaphony. He changed the meaning of diaphony from dissonance to a double sound. He called it diaphony because it referred to separate tones heard together and not a single melody.

Hucbald was a Benedictine monk of St. Armand in Flanders at the end of the 9th and the beginning of the 10th Century. He was identified with music all his life, and was the first man to treat harmony in a way understandable to us today. His works are of the highest importance in the history of art. Hucbald calls "Symphony" an agreeable concord of separate sounds joined together, an agreeable mixture of certain sounds. He keeps the six symphonies used by his predecessors. At his time it was not called harmonic music, but organum or diaphony. "One called a song composed of symphonies, diaphony or organum" says Hucbald.¹

The religious part singing known as sacred organum employed only the 4th and 5th, but another method, "profane"

1. Coussemaker, Histoire de l'Harmonie au Moyen Age (1852) p. 15.

or secular organum, was also in use. This latter type employed the 2nd and 3rd which made for less harsh progressions, and added more variety. Actually the secular organum rather than the sacred organum seems to have been the pioneer in harmonic progress, because going forward to 1322, we find an edict, "De Vita et honestate clericorum" of Pope John XXIII at Avignon, forbidding the use of secular organum at church festivals, as too Mundane.¹ Possibly at first the secular type was allowed in the church, but as it pressed forward it became too daring for the conventional ecclesiastics, therefore the two paths separated. It is with secular music, as we shall see later, that the greatest impetus is given to the slowly progressing harmony. The part of the church in music should not be belittled however, because later we find the reckless secular tendencies running away with themselves and the church acting as the stabilizer. Both characteristics are valuable, the finely controlled dignity of the religious and the freer fresh courage of the secular, in developing music to its rightful standing as one of the fine arts.

Despite the fact that the sacred organum of the 10th century is nearly unbearable to us, many ecclesiastics write of the "sweet organum" of their time. Apparently it was thoroughly approved and enjoyed. Hucbald recommends a

1. Emil Naumann, The History of Music (19), p. 207.

"moderate" time in singing, and vocally performed, the 4ths and 5ths do not annoy us as they might if otherwise presented. Hucbald does not himself claim to be the originator of the system of 5ths, as he speaks of it as having been already known. However it is to him that we are indebted for having noted and fixed its theoretical basis so that progress could be made from that point. He established a real beginning of polyphonic music with recognition of its harmonic basis.

People have often wondered why consecutive 5ths should be the first step in the evolution of harmony. As we have said before, the first use of 5ths and 4ths was not for the sake of variety or part singing, but merely considered a way of strengthening the melody and at the same time accommodating the different vocal ranges. Furthermore, there seems to be a natural tendency for the amateur to resort to singing in perfect 5ths with the melody when "harmonizing" today. If one listens to a community sing it may be observed that the more daring inexperienced tenors will often soar along a 5th above or 4th below the melody. These consecutive 5ths then, would seem to be perfectly normal implements for the novice in music to employ. It is interesting to note that Russia used them up to the 12th century. Iceland, being pretty much cut off from the general influence of European Art, still does its folk singing in this method.

The province of Alemtejo in Portugal is also said to do most of its part singing in 4ths and 5ths. Also this method has been found in songs of uneuropeanized South African tribes: from a European point of view, all these peoples have developed only to the 9th century harmonically. They are living examples of first experiments in part singing employing the consecutive 5ths and 4ths.¹ This seems to be the first step in the natural development of harmony.

Upon considering Hucbald's works a little more specifically we find that there were two kinds of diaphony:

(1) A song accompanied by 1, 2, or 3 parts which followed it by direct movements in 8vas, 4ths, 5ths, double 8vas, 8vas, and 5th, 8va and 4ths, with redoubling of these intervals in a higher or lower part (sacred).

(2) Two parts only, melody and organum, but the organum accompanying the melody by moving either directly, obliquely, or contrary to it, using other intervals than those ranged under the name of symphony. (the above)

An example of the second type of diaphony from Hucbald's book "Manuel de Musique" shows one the unison, second, minor 4th, and 5th in use. Also one notes the three motions, parallel, oblique, and contrary, which constitute one of the principal elements of modern harmonic music.

1. Oxford Companion to Music (1877), p. 397.

This type of diaphony is a real progress for harmony. It is this which began the departure from the sterile art of monotonous succession of the same intervals. It opened the way to the many combinations which raised harmony to its present highly developed state as an organized art.

In the 11th century we have Gui D'Arezzo, a capable musician in many respects. He was a noted singer and expert teacher, and in 1026 was called to Rome by the Pope to explain his system. He did not, however, really change the state of diaphony. The explanations and examples of Gui from his "Micrologue", the only one of his works where he speaks of it, show diaphony to be in about the same condition as before. Here is his definition of it: "Diaphony", says he, "that one calls organum, implies the separation of the voice -- and the separated voices, one from the other sound differently in harmonizing, or harmonizing in sounding differently". After having stated how diaphony is practised in his time, doubtless in Italy, he gives a three-part example composed of a melody, a part a 5th above and a part a 4th below. This is the same as previous examples of Hucbald. He explains the type of diaphony to which he gives preference because he said the type then in use was harsh. They both seem equally crude to us, but it is interesting to note the intervals he used. The major 3rd, major 2nd, minor 3rd and minor 4th are acceptable whereas he doesn't

allow the minor 2nd or minor 5th. The minor 3rd is considered an interval of secondary quality, while the 4th is given primary classification. It is not worthwhile to repeat all the rules set up by Guido. It is worthwhile, however, to note that the tendency was away from successive octaves, 5ths, and 4ths. Also it is apparent that nearly all the intervals were in use then if not entirely accepted.

Diaphony tended more and more away from the successive progressions of the same intervals. Gradually variety crept in and crowded out the monotonous successions of intervals previously employed.

Toward the middle of the 11th century this diaphony of intervals in various motions, somehow attracted the attention of the diadactitions. Jean Cotton, who came towards this epoch, did not speak of diaphony by intervals and similar motion. He says, "Diaphony is an ensemble of different sounds conveniently (easily) united. It is done by two singers at least, in such a way that one takes the principal melody -- the other by different sounds, circles easily around this melody -- and at the end the two voices join in a unison or octave. This kind of singing is usually called organum. "The clarity with which he states the rules shows that some quite notable modifications were made following Guido Arezzo.

At the last half of the 11th century, we find varied

The first part of the book is devoted to a general introduction to the subject of the history of the English language. It begins with a discussion of the early forms of the language, such as Old English, Middle English, and Modern English. The author then discusses the influence of other languages on the English language, particularly Latin and French. The second part of the book is devoted to a detailed study of the English language in the Middle Ages. It begins with a discussion of the early forms of the language, such as Old English, Middle English, and Modern English. The author then discusses the influence of other languages on the English language, particularly Latin and French. The third part of the book is devoted to a detailed study of the English language in the modern period. It begins with a discussion of the early forms of the language, such as Old English, Middle English, and Modern English. The author then discusses the influence of other languages on the English language, particularly Latin and French.

diaphony, rather than the old successions of similar intervals in similar motion, expressed for the first time by Jean Cotton.¹ These two facts exercised a big influence on harmonic development.

1. Coussemaker, Histoire de l'Harmonie au Moyen Age (1852), p. 26.

III. PROGRESSION OF HARMONY IN DISCANT

Besides diaphony there was another form of harmony which exercised a strong influence on both the music of simultaneous sounds, and on diaphony itself. It was known as discant from the end of the 11th or the beginning of the 12th century. The word discant came from the word "dis" two, and "cantus" song, that is to say two songs or double songs.

Many writers on this subject make no distinction between diaphony and discant. Coussemaker however, gives a clear definition of each style, and succeeds in clarifying this stage of development as does no other writer known to us. Discant, he says, originated in two parts: the principal melody, called the tenor, and the accompanying part, the discant. Later the tenor was accompanied by many parts which were called "motet, triplum" or "quadruplum" accordingly as they composed three or four parts. The point of distinction between discant and diaphony is that discant was a measured counterpoint whereas diaphony was a counterpoint simply note against note, not subjected to the measure. Diaphony is often in writing, wrongly called discant.

Franco of Cologne says that discant is the harmonious joining of different melodies. These different songs were adjusted proportionately by longues, breves, and semi-breves

and were represented in writing by different figures. This explanation is confirmed by Jean de Muris, who agrees that simple discant was that in which all the parts were measured in time, as opposed to the other, pure organum or diaphony, which was not measured in all the parts. Diaphony was used long before discant. Coussemaker hunted vainly in the authors of the 12th and 13th centuries for the origin and first uses of discant. What he found about it clearly referred to a more advanced stage of the art.

Egidius de Murina, a writer of the fourteenth century and author of a treatise on measured song, is the only one to Coussemaker's knowledge, who appeared to have pointed out this primitive method, a very crude method without doubt. Here is the comment found in the analysis of M. Danjou who first discovered the treatise of Egidius. "In order to join a second part to a melody, one often took at random a response, or another song. Then modifying and altering the original value of the note, one adjusted this song beneath the principal melody, and formed then a second part or tenor. If one wished a third part or contra-tenor, one found a third song, which one arranged as well as possible with the other parts."

Jerome de Moravie (c. 1200 A.D.), of the convent of the "Freres precheurs de la rue Saint-Jacques". of Paris, is

THE JOURNAL OF THE ROYAL ANTHROPOLOGICAL INSTITUTE
VOLUME 100 PART 1 1970

CONTENTS

THE JOURNAL OF THE ROYAL ANTHROPOLOGICAL INSTITUTE
VOLUME 100 PART 1 1970

CONTENTS

THE JOURNAL OF THE ROYAL ANTHROPOLOGICAL INSTITUTE
VOLUME 100 PART 1 1970

CONTENTS

THE JOURNAL OF THE ROYAL ANTHROPOLOGICAL INSTITUTE
VOLUME 100 PART 1 1970

CONTENTS

THE JOURNAL OF THE ROYAL ANTHROPOLOGICAL INSTITUTE
VOLUME 100 PART 1 1970

CONTENTS

THE JOURNAL OF THE ROYAL ANTHROPOLOGICAL INSTITUTE
VOLUME 100 PART 1 1970

CONTENTS

the author of a treatise on music unpublished until the late 19th century. This document revealed many names of authors and many musical treatises hitherto unknown. Chapter twenty-six is of particular interest to us from the harmonic point of view. It contains the treatise of common discant, the treatise of Jean de Garlande, the treatise of Franco of Cologne and that of Pierre Picard. Also mentioned is the didactition, Jean de Bourgogne. These treatises, especially the first on common discant, are important in musical history. Historians have not given sufficient attention to the documents of Jerome de Moravie. They serve to form a point of demarcation from the earliest diaphonists, Hucbald, Gui d'arezzo and their imitators. The earliest rules of discant are very similar to those of diaphony. The document on common discant calls only three intervals consonants -- the unison, fifth, and octave. The rest are considered dissonances, more or less pronounced. Two general rules from the treatise state that when the melody ascends, the discant ought to imitate in the octave, and when the melody descends, the discant ought to imitate in fifths.

A treatise of Gui de Chalis from the monastery of Citreaux in Bourgogne, 12th century, shows considerable progress over the above. When the melody ascended the discant was permitted to begin at will on the octave, fifth, or unison. In the case of the discant descending, it could begin

on the fourth or unison. Also much more freedom was allowed in resolutions.

The discant of Jerome de Moravie abandons the use of the fourth, but progresses to the use of intermediary or passing tones. This latter step is particularly worthy of note for two reasons. Discant becomes definitely distinguishable from the old diaphony. Also, it was through passing tones and suspensions that the ear became accustomed to all the intervals and this above all speeded the progress of harmony. The parts were allowed much more freedom of motion which led to the possibility of avoiding successive fifths.

The fifth document from Coussemaker reveals that in the 12th century consecutive fifths were avoided, and that the up to then "dissonant" thirds and sixths were permitted when used in contrary motion. There is another distinguishing feature between discant and diaphony. The discant was above the melody whereas in the old diaphony the added part was below the melody.

In the sixth document we find that the third and sixth were used much more freely; and that passing tones were in regular use. These developments produced a variety in the discant which the fifth, octave, and unison in even notes could not hope to achieve.

In document no. 6, the problem of accidentals arises for the first time, in connection with the tritone and the minor fifth.¹

Although first attempts at harmony were hampered by numerous rules and untrained ears, gradually the many difficulties were overcome, and real progress began. The same has been equally true in other fields. Strong opposition to the new and reluctant abandoning of the old has always been the case. Once the primary steps are taken however and the most difficult period, such as this early stage in music, is passed, natural free development follows.

1. Coussemaker, Histoire de l'Harmonie au Moyen Age (1852) p. 39.

IV. EARLY SECULAR MUSIC

Bauer says of music up to this time that it might be called "on purpose" music. A parallel development was that of popular song. The peoples of the world have always had their own spontaneous folk songs, developing freely and naturally apart from rules and regulations. Had it not been for the Troubadours, Trouveres, and Minnesingers we might know only a very little of the secular development of music in the middle ages. Through them also this style of music developed rapidly and far surpasses the slow careful steps of the church music. It comes closer to modern music in its progress than church music does for 3 centuries after the Troubadour movement died out.¹

Each country had its "strolling musicians". In Germany these songsters were more or less tramps and idlers. The strolling players and showmen who travelled the countryside lent recruits for the "Troubadors" of Italy. In France they did not perform their own songs, but were represented by Jongleurs from shows of various kinds. It should be understood that the music sung by these minstrels was the folk music of the people of Gaul, Germany, and Italy. These men were but performers of their national music.² Due to their

1. Bauer and Peyser, How Music Grew (1939), p. 87.

2. Emil Naumann, The History of Music (19), p. 228.

THE HISTORY OF THE

REIGN OF KING CHARLES THE FIRST

IN WHICH ARE CONTAINED THE
MOST IMPORTANT AND INTERESTING
EVENTS OF HIS REIGN, FROM THE
BEGINNING OF HIS REIGN, TO THE
END OF HIS REIGN, IN THE
YEAR 1649. BY
JOHN BURNET, BISHOP OF SALISBURY.
IN TWO VOLUMES. THE FIRST
VOLUME CONTAINS THE HISTORY
FROM THE BEGINNING OF HIS
REIGN, TO THE END OF HIS
REIGN, IN THE YEAR 1649.

THE SECOND VOLUME CONTAINS
THE HISTORY FROM THE BEGINNING
OF HIS REIGN, TO THE END OF
HIS REIGN, IN THE YEAR 1649.
THE HISTORY OF THE REIGN OF
KING CHARLES THE FIRST, IN
WHICH ARE CONTAINED THE
MOST IMPORTANT AND INTERESTING
EVENTS OF HIS REIGN, FROM
THE BEGINNING OF HIS REIGN,
TO THE END OF HIS REIGN, IN
THE YEAR 1649. BY JOHN
BURNET, BISHOP OF SALISBURY.
IN TWO VOLUMES. THE FIRST
VOLUME CONTAINS THE HISTORY
FROM THE BEGINNING OF HIS
REIGN, TO THE END OF HIS
REIGN, IN THE YEAR 1649.

THE SECOND VOLUME CONTAINS
THE HISTORY FROM THE BEGINNING
OF HIS REIGN, TO THE END OF
HIS REIGN, IN THE YEAR 1649.

cleverness of presentation, their skillful musicianship in accompanying themselves and their individual rhythmic sense, they were able to hold both the public approval and that of royalty for two centuries. The material we have of secular music of this time is scarce as it is, and had it not been for these wandering minstrels that period might well have been a complete blank in music history.

We will not stop here for a complete history of these people, interesting as it is, for there are innumerable names connected with historical anecdotes. Rather let us look at what is actually known of their musical style. There are two important factors: First their tonality, and secondly their use of harmony. The difference between the fresh appealing melodies of the troubadours and the austere, dignified melodies of the church is strikingly apparent.

For some time music historians stated, and some still insist that the music of the Troubadours and Trouveres was essentially melodic and contributed little to the harmonic development of music. True, their music was to a great extent melodic, but from further research, mainly that of Coussemaker, we find that many Trouveres were harmonists. The manuscript of Montpellier establishes this fact without doubt. One finds that the Trouveres composed not only in motets, trios, and quartets, but that they made some verses

1. Emil Naumann, The History of Music (19), p. 228.

especially adjusted to part singing. In fact the Trouveres composed in all the known forms of that time. Although we now know it to be untrue, Adam de la Hale was until recently considered to have been the only harmonic Trouvere. We have seen that the art of writing in many parts had been cultivated by a great number of Trouveres; among other by Guillon Ferrant, Moniot d'Arras, Moniot de Paris, le Prince de Moree, Thomas Herrier. But none of these could compare with the celebrated artist Adam de la Hale.

To go back to tonality: -- Our sensations in tonality are based on one scale. Many of the trouveres used the Lydian and Hypolydian scales -- which correspond to scales beginning on our tones fa and do. Therefore, these compositions had a truly modern tonality.¹ They are amazingly similar, both melodically and rhyimically, to those of today. The statement in Grove's Dictionary that the period of the rise of harmony is the period of the decay of the old tonality, applies in the 12th and 13th centuries similarly as in the 16th century. The old modes are wholly melodic in feeling whereas the major scale is harmonic and inseparable from the harmonic system. In reverse consideration one may easily note that the occasional modern use of the old modes often results in abandoning our harmonic system, and thinking melodically again, using the old consecutives of organum and

1. Theatre Francais au Moyen Age (1839), Introd.

faux-bordon.

Until recently the burden of proof that the Trouvères were harmonists, rested in such ambiguous references as the fact that they used flat bridged instruments the playing of which necessarily implied the sounding of two or more tones together. However, with the findings of Coussemaker in his studies of the Montepellier manuscript, there seems to be no doubt as to the fact that a great many of the Trouvères knew and cultivated the art of part writing. Some of the names revealed were Gillon Ferrant, Moniot d'Arras, Moniot de Paris, le Prince de Moree, Thomas Herrier, and the already well known Adam de la Hale. Many of the national folk song forms date back to this period of the Minstrels, Minnesingers and Trouvères. In France there was the Chanson, in Germany, the Lied, in England the Song and Glee, in Italy the Frottale, the Vilotte, the Canzonet. The old French Chanson was a favorite form of the rising contrapuntists in the Netherlands as well as France.¹ There was also the Motet, Rondel, and Pastourelle -- These were all favorite forms of the wandering musicians from the 12th century on. We find though that to the Trouvère goes not only the honour of having cultivated musical art from the melodic point of view, but also that of having made progress by the invention and putting to use

1. Dr. Frederic Ritter, The History of Music (1884), p. 111.

of harmonic procedures. Up to just recently these have been attributed to a later period in music history.

It is worthwhile to consider a few of the Trouvères of whose works we have examples from the Montpellier Manuscript, although the known facts of this period are very limited.

The first is Gillon Ferrant, we only have examples of his works. When one studies his music from the melodic side it appears to be skillfully composed. Harmonically this is not the case. There seems to be more difficulty in managing the parts.

Jehan de la Fontaine, however would seem to have been a composer of great merit. This is clearly revealed by his skill in the harmonic composition of his motet.

Of the two Moniots, D'Arras and de Paris, the second would seem to have been the abler musician. He excelled in Pastourelles and Chansons, employing easily singable, rhythmic melodies.

Le Prince de la Moree, originally thought only a poet, appears also to have been a musician. The manuscript includes a three part motet by this composer.

Thomas Herriers is also included here seem to have been a fairly facile harmonist. Also included in the Manuscript are many works of anonymous composers.¹

1. Coussemaker, L'Art Harmonique aux XII^e et XIII^e Ciescles (1865) p. 197.

That trouvère most consistently showing a fairly clear idea of tonality in the modern sense, and often writing in the major mode, is Adam de la Hale. He was until recently considered the only harmonic trouvère. We have seen that the art of part writing was cultivated by many trouvères, but Adam was their superior. When one examines his harmonic works, this becomes only too evident. Without doubt, he owes this to the studies which he began at the monastery of Vaucelles, and completed later at the University of Paris. Adam lived at about 1240. He composed the earliest type of comic opera; "Le jeu de Robin et de Marion" given at the court of Naples in 1285. He composed in many forms, possibly favoring the rondel and the motet. The Rondel was a type of discant in which the three parts sang the same words. It had for its basis a melody usually invented by the composer, sometimes a borrowed popular tune. Adam being a skillful musician, composed original melodies and rarely went elsewhere for his material. The motet was essentially a musical poem, the melody being inseparable from the text. It was a harmonic composition. The oldest motets were composed of a principal part which sang the text, while an accompaniment consisting of a fragment of a plain chant or a popular melody was done vocally or instrumentally. This fragment which one called the "tenor," doubtless because it was sup-

...the ... of ...

...the ... of ...

...the ... of ...

...the ... of ...

...the ... of ...

...the ... of ...

...the ... of ...

...the ... of ...

...the ... of ...

posed to hold the voice on pitch and in rhythm, was a known familiar motive. Later the motet took a very artistic form. It became a three or four part composition harmonically conceived. Each part had different words, the tenor serving the same purpose as formerly, was still a familiar melody. The motets of three or four parts, especially those with French words, seemed to have been compositions in which each part had a special role; the union of all creating a harmonic ensemble as the modern artist desires in his trios, quartets,¹ or choral works.

However, although the old composers may have had similar ideas to those of modern musicians, the restraints and limitations of their methods prevented their realization. With Adam de la Hale there is marked progress in the development of harmony. He appears to have been the first to use to any extent the consonance of the 3rd and its inversion the 6th, bringing into the discant a sweetness hitherto unknown. He also tried the use of the perfect chord, without, however, entirely abandoning the system of consecutive 4th and 5ths.²

In summarizing the contributions of these early secular composers, we find that they served as a fresh invigorating impulse in musical development. They are the first to

1. Coussemaker, Oeuvres Completes, Adam de la Hale (1872) Introd., p. LXXIV.

2. Albert Lavignac, Music and Musicians (1903), p. 394.

... of the
... ..
... ..

... ..
... ..

... ..
... ..

... ..
... ..

... ..
... ..

... ..
... ..

... ..
... ..

... ..
... ..

... ..
... ..

... ..
... ..

... ..
... ..

... ..
... ..

... ..
... ..

make steps away from the melodically conceived, modal ecclesiastical music. They were apparently, consciously or unconsciously, the first to sense the importance of establishing a tonality in harmonic music. Their importance in the development of the early stages of harmonic music is obvious when serious consideration is give to their works.

and the first of the two main branches of the
... ..
... ..
... ..
... ..
... ..
... ..

V. FRENCH SCHOOL

From the 12th century music began its true development as an art. It was no longer the hobby of single composers, here and there, but an art, although still in its infancy. As such it became the object of study of many skilled and brilliant men. Every country had its representatives in music history from that time forward. Each developed her own particular style as was true in all the arts. The guiding influence centered first in France, at Nôtre-Dame in Paris. As this group lost its fresh inventive powers the Gallo-Belgians assumed the lead, and the Netherland School continued the development. Thus the history of music and growth of harmony progressed in first one center, then another, through the ages down to the present day.

We find in many books that the first period in development is called the Polyphonic Period. As we are interested in harmony, this music, conceived along melodic lines, may appear to be out of our line of interest. It seems to us however, that the original purpose of part writing was harmonic, the sounding of two tones together. Furthermore its development depended on its acceptance by the human ear. For years musical progress was curtailed because its harmonic effect was displeasing to the human ear. Counterpoint might be defined as the writing of two or more melodies

so that they sound well when played simultaneously. The emphasis is on the harmonic effect here again. Four of the world's loveliest melodies could be performed simultaneously, and yet result only in harshness and unpleasant sounds. Therefore the harmonic is always present and final effects in part writing are dependent upon it always; whereas, the melodic is rather a style of part writing. Counterpoint cannot divorce itself from harmony, which it must be acknowledged, is the foundation of all types of music.

Before considering the composers of the French school it is interesting to note that they composed mainly in three contrapuntal forms, first there was the motet which we have already considered. Secondly, the Rondeau or Rondel was extensively used. We have seen this also in the books of Adam de la Hale -- The Rondeau was characteristically secular whereas the motet might be either sacred or secular. The Conduit, (conductus) also primarily secular, was presumably written for organ or other instruments of that time in two, three, or four parts.

Throughout history one finds that the socially awakened cities drew to themselves the learned scholars and teachers who joined in schools for the advancement of culture. In 1180, Paris was the center of European culture. Its university numbered among its faculty many eminent musicians whose influence was felt throughout the known world.

For the sake of clarity it is advisable to divide the efforts of the Parisian Musicians into four periods.

The first extends from 1100 to 1140 A.D. and Léonin is the first master of note. He was surnamed "Optimus Organista" by his friends, due to his excellence as an organist. He wrote a treatise on organ playing, dealing especially with the performance of graduals and antiphonals. Also in this book is a collection of harmonic accompaniments set to original and sacred melodies.

Léonin was succeeded by Pérotin, also an able organist and discanter, although not quite Léonin's equal. He was a fairly prolific composer for that period, having written many two, three, and four-part conduits which gained a fair degree of popularity in Paris. His compositions and those of his immediate successors formed part of the standing repertory of the Notre-Dame Choir, notably throughout the 14th century.

The years 1140 to 1170 A.D. mark the second period of development. At this time Robert de Sabillon gained celebrity as a "Déchantéur". He was followed by Pierre de la Croix who was especially acclaimed for his improvements in the system of notation. According to Jean de Muris of a later period, Pierre adopted the practise of setting against the breve from 4 to 9 semi-breves. Jean de Garlande a con-

THE UNIVERSITY OF CHICAGO PRESS

CHICAGO, ILLINOIS 60607-7073
TEL: 773/936-3400 FAX: 773/936-3401

INTERNET: <http://www.uchicago.edu>
E-MAIL: orderdept@uchicago.edu
COURTESY OF THE UNIVERSITY OF CHICAGO PRESS
PUBLISHED BY THE UNIVERSITY OF CHICAGO PRESS
110 SOUTH MICHIGAN AVENUE, 3RD FLOOR
CHICAGO, ILLINOIS 60607-7073
TEL: 773/936-3400 FAX: 773/936-3401
E-MAIL: orderdept@uchicago.edu

THE UNIVERSITY OF CHICAGO PRESS

CHICAGO, ILLINOIS 60607-7073
TEL: 773/936-3400 FAX: 773/936-3401
E-MAIL: orderdept@uchicago.edu
COURTESY OF THE UNIVERSITY OF CHICAGO PRESS
PUBLISHED BY THE UNIVERSITY OF CHICAGO PRESS
110 SOUTH MICHIGAN AVENUE, 3RD FLOOR
CHICAGO, ILLINOIS 60607-7073
TEL: 773/936-3400 FAX: 773/936-3401
E-MAIL: orderdept@uchicago.edu

THE UNIVERSITY OF CHICAGO PRESS

CHICAGO, ILLINOIS 60607-7073
TEL: 773/936-3400 FAX: 773/936-3401
E-MAIL: orderdept@uchicago.edu
COURTESY OF THE UNIVERSITY OF CHICAGO PRESS
PUBLISHED BY THE UNIVERSITY OF CHICAGO PRESS
110 SOUTH MICHIGAN AVENUE, 3RD FLOOR
CHICAGO, ILLINOIS 60607-7073
TEL: 773/936-3400 FAX: 773/936-3401
E-MAIL: orderdept@uchicago.edu

temporary of Pierre, was a master diadctition. He wrote on both mensural music and music theory, showing considerable improvement in the latter. He and another Master of this period, Aristote, both distingusihed between three types of dissonance; namely the perfect, imperfect, and middle. Jean de Garlande was also a fine composer, using original illustrations in both his lectures and writings. Many of his fellow musicians borrowed music for their works, not being sufficiently able composers to use their own material.

We find the third period named by Coussemaker "la periode franconienne," as it included the two Francos, the Older and the Younger. Both these masters, coming in the same period and of the same name, distinguished themselves by their work in the field of mensural music. The elder was born in Paris and was named the Parisian Franco. The younger is called the Cologne Franco. The origin of the improved mensural song is accredited to the former. In addition, he introduced into the choir of Notre-Dame a perfected system of rules and regulations, and also clarified the system of various note values. Franco of Cologne should probably be considered a disciple of the Parisian school, this being by no means a belittling factor.

He was both a theoretician and composer, some of his works being performed as late as the 14th century -- some two hundred years after his lifetime. Of this same period a master,

whose work we have already considered, should be again mentioned, Jérôme de Morâvie. Although a native of Austria, he left that country when a young man, to spend the remainder and better part of his life as a music master in Paris. Many of the rules laid down in his treatise are identical with those exercised today.

From 1230 to 1370 might be considered the fourth period. Represented by Phillippe de Vitry, Jean de Muris, and Guillaume de Machaut, this era has been considered the period of "musica nova". These men were the exponents of the "ars nova" in opposition to the "ars antiqua" of the two Francos. An important difference between the two is found in the introduction of many musical signs in the ars nova, which made for freer part movement. Philippe, Bishop of Meaux, was born in 1270 A.D. at Vitry near Calais and died in 1330 A.D. To him is attributed the division of the semi-breve into two minims, and also the use of the semi-minima or crotchet. His works are quite extensive. Among them are the "Ars Contrapuncti Magistre Philippi de Vitriaco", the "Ars Nova" and the "Ars Compositionis de Motetis, compellata a Philippo de Vitry, Magistro in Musica". Of equal importance as a composer was Jean de Muris of Normandy, 1300-1370 A.D. He became Doctor of the Sorbonne in 1330 A.D. and later Deacon and Canon. Besides being a learned musician he was also a scholar in philosophy and mathematics.

From his writings we obtain the first clear definition of discant and an explanation of three kinds of tempi in use at his time; **Lively**, **Moderato**, and **Slow**. At this time the practise of embroidering by discant became greatly misused and tastelessly employed. Jean de Muris reacted violently against these inartistic displays, and gave many an impassioned lecture to his contemporaries on this subject.

The last master we consider in this school is Guillaume de Machaut. He was born at Rethel in the province of Champagne, in 1284 and was still living in Paris in 1369. Like the old trouvères, Machaut was both poet and musician.¹ He composed the first celebrated mass known today, the Coronation mass, for the coronation of Charles V. In this mass are found the beginnings of the style utilized by Des Pres and even Gombert and Lassus of the Netherland School. Considered by itself, however this Mass is not a good specimen even of early polyphony. Parallel 5ths and 8vas are used to excess; a practise which had been already prohibited in the ars nova. Also the harmony is overwhelmingly discordant.² Nevertheless, his four part work is noteworthy for the normal completeness of its chords. Both the 3rd and 5th are generally present and in general his works tend to harmonic propriety.³

1. Emil Nauman, The History of Music (1887) pps. 274-303.

2. The Art of Music (1915) Vol. I, p. 231.

3. Grove's Musical Dictionary (1938) Vol. III, p. 269.

After Machaut, Paris continued to be the Music center of Europe for some years as it had already been for two centuries. However, its prestige gradually lessened, not due to a decline of its actual original power, but rather to an abuse of that power.

True, the standards of the Nôtre Dame Masters were scholarly although somewhat uninteresting. In the 14th century, deterioration began to creep in as the singers made a display of their ability in improvisation. Musical writing of the canons and rounds was done in a type of shorthand presumably understood to the singers. Their interpretations became abusive rather than artistic unfortunately. Chapel singers who were well trained in the correct use of accidentals, began to take liberties in their performance of the venerable plain-chant. Carried away by new ideas and with complete lack of constraint, they rendered many religious chants hopelessly unrecognizable. Pope John XXII in 1322 issued a formal protest of this profane practise that violated the spirit of the church music with frivolous, too rhythmic ornamentations. And thus the Parisians began to lose their superiority in the musical word.

It must be granted, nevertheless, that its Masters contributed largely to Music Progress in their scientific and practical labors. First, the resources of notation increased. Secondly, double counterpoint was cultivated

considerably. Thirdly, there was greater freedom in metre and rhythm. Lastly, several voices became more nearly independent, and attention was paid to problems involving mensuration.

In a finer sense, however, they did not ascend to the level of truly artistic composing. They had no idea of "symmetrical arrangements, based upon the lines of a pre-conceived design. Their highest aspirations extended no farther than the enrichment of a given melody with such harmonies as they were able to improvise at a moments notice." True composition depends for its existence upon the inventive and selective mind of the composer in presenting an original musical idea in all its various forms; the finished product is a work of art.¹

We must therefore consider the French School as having accomplished a necessary part in the theoretical development of music as an art; and look to the next school for the ascendance of music to an artistic level.

1. The Art of Music (1915) Vol. I, p. 233.

VI. ENGLISH MUSIC

The break in European Music history of the Middle Ages, that has been so ably filled in by Coussemaker, apparently has yet to be discovered in Great Britain -- In fact this period is so lacking in material that it has been completely ignored by music historians until the time of Dunstable, and even then material is light - Of late much of his music has been found, however.

Evidently the practise of singing in parts was observed in Great Britain from a very early period. Mr. William Chappell in his "Popular Music of the Olden Time" quotes Gerald Barry. (1185) "The Britons do not sing their tunes in unison like the inhabitants of other countries, but in different parts. So that when a company of singers meets to sing as is usual in this country, as many different parts are heard as there are singers, who all finally unite in consonance and organic melody."¹

In 596 Augustine's mission, with many books, was sent to England by Pope Gregory. From this time Abbeys and monasteries increased rapidly in number and each one studied and developed music. Their influence cannot be underrated. Music was in daily use and considered a necessity in fine living. One abbey of particular interest to us was that of

1. William A. Barrett, English Glee and Part Songs (1886) p. 20.

Introduction

The purpose of this study is to investigate the effects of the proposed system on the performance of the system. The study is divided into two main parts: a theoretical analysis and an experimental evaluation. The theoretical analysis is based on the principles of the system and the experimental evaluation is based on the results of the experiments.

The results of the experiments are presented in the following sections.

The first part of the study is a theoretical analysis of the system.

The theoretical analysis is based on the principles of the system and the experimental evaluation is based on the results of the experiments. The results of the experiments are presented in the following sections. The first part of the study is a theoretical analysis of the system. The theoretical analysis is based on the principles of the system and the experimental evaluation is based on the results of the experiments. The results of the experiments are presented in the following sections.

The results of the experiments are presented in the following sections. The first part of the study is a theoretical analysis of the system. The theoretical analysis is based on the principles of the system and the experimental evaluation is based on the results of the experiments. The results of the experiments are presented in the following sections. The first part of the study is a theoretical analysis of the system. The theoretical analysis is based on the principles of the system and the experimental evaluation is based on the results of the experiments. The results of the experiments are presented in the following sections.

The results of the experiments are presented in the following sections.

Reading, a Benedictine house, founded by Henry I in 1121. It became rich and influential and was a home of art and learning. In the library of this abbey was found a M.S. of the Reading Rota, a round, "Sumer in icumen in." This brings us to the realization that all music was not church music. From prehistoric times there were always glee-men or strolling minstrels. Always and everywhere there was folk music. Music as we know it sprang from that double source, church and secular music. The earliest specimen of really artistic music in the world therefore, is not a church composition but a poet's song, uttering his delight in spring.¹

Ford in his English Music says "Just as there must have been great poets before Homer, so this work must be the **fortunate** survivor of a long lost school that, unhappily for us had no enduring medium for transmission of its genius to later ages. It has perfect skill in execution, commanding appeal to the purest emotions, and the power to leave the mind in a state of ecstatic rest or emotional contentment that makes one oblivious of the world while listening or watching."² This little piece would then seem to be the first truly artistic expression in its field known to us today.

-
1. H. Crsmond Auderton, Early English Music (1920) p. 3.
 2. Ernest Ford, English Music (1912) p. 41.

The first of these is the fact that the
 second of these is the fact that the
 third of these is the fact that the
 fourth of these is the fact that the
 fifth of these is the fact that the
 sixth of these is the fact that the
 seventh of these is the fact that the
 eighth of these is the fact that the
 ninth of these is the fact that the
 tenth of these is the fact that the
 eleventh of these is the fact that the
 twelfth of these is the fact that the
 thirteenth of these is the fact that the
 fourteenth of these is the fact that the
 fifteenth of these is the fact that the
 sixteenth of these is the fact that the
 seventeenth of these is the fact that the
 eighteenth of these is the fact that the
 nineteenth of these is the fact that the
 twentieth of these is the fact that the
 twenty-first of these is the fact that the
 twenty-second of these is the fact that the
 twenty-third of these is the fact that the
 twenty-fourth of these is the fact that the
 twenty-fifth of these is the fact that the
 twenty-sixth of these is the fact that the
 twenty-seventh of these is the fact that the
 twenty-eighth of these is the fact that the
 twenty-ninth of these is the fact that the
 thirtieth of these is the fact that the
 thirty-first of these is the fact that the
 thirty-second of these is the fact that the
 thirty-third of these is the fact that the
 thirty-fourth of these is the fact that the
 thirty-fifth of these is the fact that the
 thirty-sixth of these is the fact that the
 thirty-seventh of these is the fact that the
 thirty-eighth of these is the fact that the
 thirty-ninth of these is the fact that the
 fortieth of these is the fact that the
 forty-first of these is the fact that the
 forty-second of these is the fact that the
 forty-third of these is the fact that the
 forty-fourth of these is the fact that the
 forty-fifth of these is the fact that the
 forty-sixth of these is the fact that the
 forty-seventh of these is the fact that the
 forty-eighth of these is the fact that the
 forty-ninth of these is the fact that the
 fiftieth of these is the fact that the
 fifty-first of these is the fact that the
 fifty-second of these is the fact that the
 fifty-third of these is the fact that the
 fifty-fourth of these is the fact that the
 fifty-fifth of these is the fact that the
 fifty-sixth of these is the fact that the
 fifty-seventh of these is the fact that the
 fifty-eighth of these is the fact that the
 fifty-ninth of these is the fact that the
 sixtieth of these is the fact that the
 sixty-first of these is the fact that the
 sixty-second of these is the fact that the
 sixty-third of these is the fact that the
 sixty-fourth of these is the fact that the
 sixty-fifth of these is the fact that the
 sixty-sixth of these is the fact that the
 sixty-seventh of these is the fact that the
 sixty-eighth of these is the fact that the
 sixty-ninth of these is the fact that the
 seventieth of these is the fact that the
 seventy-first of these is the fact that the
 seventy-second of these is the fact that the
 seventy-third of these is the fact that the
 seventy-fourth of these is the fact that the
 seventy-fifth of these is the fact that the
 seventy-sixth of these is the fact that the
 seventy-seventh of these is the fact that the
 seventy-eighth of these is the fact that the
 seventy-ninth of these is the fact that the
 eightieth of these is the fact that the
 eighty-first of these is the fact that the
 eighty-second of these is the fact that the
 eighty-third of these is the fact that the
 eighty-fourth of these is the fact that the
 eighty-fifth of these is the fact that the
 eighty-sixth of these is the fact that the
 eighty-seventh of these is the fact that the
 eighty-eighth of these is the fact that the
 eighty-ninth of these is the fact that the
 ninetieth of these is the fact that the
 ninety-first of these is the fact that the
 ninety-second of these is the fact that the
 ninety-third of these is the fact that the
 ninety-fourth of these is the fact that the
 ninety-fifth of these is the fact that the
 ninety-sixth of these is the fact that the
 ninety-seventh of these is the fact that the
 ninety-eighth of these is the fact that the
 ninety-ninth of these is the fact that the
 hundredth of these is the fact that the

Continental wars in England and on the continent, the conquest in England and the stern repression under the Norman rule cannot have favoured the growth of music as an art, yet progress was made. From a passage in "Apud Avaros" by Walter Map, we now know that rounds were common among the people of his day, 1140. This form of canonic art, therefore, was common in English folk music before the Middle of the 13th century only tentatively finding its way into church music some 200 to 250 years later with Dunstable and Dufay.¹

Of the 150 yrs. following the writing of "Sumer is icumen in", we know little or nothing. As previously stated, social and political trouble were poor soil for such growth.

One of the earliest writers on music theory was Walter Odington, monk of Evesham, Worcestershire. He was born at the close of the 12th century between 1180 and 1190. In the last chapter of his treatise, Odington treats of organum, or the composition of additional parts to melodies -- This Englishman took up the science and theory of music where Franco of Cologne had left off. Odington was the first of many musical scholars to follow.

Born at Norwich in about 1310, we find Simon Tunsted who became an English Franciscan Monk and Doctor of Divinity.

1. H. Orsmond Auderton, Early English Music (1920) p. 39.

A treatise which shows him to have been a leader in early musical thought, has been edited by Coussemaker.

Following Tunsted, Jean de Muris was the next theoretician of importance. His dates may be approximately stated as 1330-1400. Although he was Chanter in the Nôtre Dame church at Paris and also Doctor and Canon of Sorbonne, consensus of opinion states him to be English. Coussemaker, as we have shown, speaks highly of Jean de Muris.

Also in this group that might be called the school of the First English Musical Authors, is John Torksey. A musical treatise is attributed to him in which he deals with ancient time tables and notation of the period, concords and discords.

Robert Handle came early in the 14th century, a musical treatise dated 1326, is ascribed to him. "Regulae cum Maximo Magistri. Franconis cum additionibus aliorum musicorum, compilatae a Robert de Handlo." It is a commentary on Franco's work, "Ars Cantus Mensurabilis".

A treatise, highly spoken of and dealing with every phase of music then existing, was written by Thomas Walsingham, namely "Regulae Magistri Thomae Walsingham," about the middle of the 14th century an interesting work named "Of the Cordis of Musike" was written by Lionel Power. The last name from this period is Theinred, who lived in 1371.¹

1. Frederick Crowest, British Music (1896) p. 284.



THE UNIVERSITY OF CHICAGO PRESS

1207 EAST 58TH STREET, CHICAGO, ILL. 60637

TEL: (773) 707-5000 FAX: (773) 707-5001

INTERNET: WWW.UCHICAGO.PRESS.EDU

1207 EAST 58TH STREET, CHICAGO, ILL. 60637

TEL: (773) 707-5000 FAX: (773) 707-5001

INTERNET: WWW.UCHICAGO.PRESS.EDU

1207 EAST 58TH STREET, CHICAGO, ILL. 60637

TEL: (773) 707-5000 FAX: (773) 707-5001

INTERNET: WWW.UCHICAGO.PRESS.EDU

1207 EAST 58TH STREET, CHICAGO, ILL. 60637

TEL: (773) 707-5000 FAX: (773) 707-5001

INTERNET: WWW.UCHICAGO.PRESS.EDU

1207 EAST 58TH STREET, CHICAGO, ILL. 60637

TEL: (773) 707-5000 FAX: (773) 707-5001

INTERNET: WWW.UCHICAGO.PRESS.EDU

1207 EAST 58TH STREET, CHICAGO, ILL. 60637

TEL: (773) 707-5000 FAX: (773) 707-5001

INTERNET: WWW.UCHICAGO.PRESS.EDU

1207 EAST 58TH STREET, CHICAGO, ILL. 60637

TEL: (773) 707-5000 FAX: (773) 707-5001

INTERNET: WWW.UCHICAGO.PRESS.EDU

1207 EAST 58TH STREET, CHICAGO, ILL. 60637

TEL: (773) 707-5000 FAX: (773) 707-5001

INTERNET: WWW.UCHICAGO.PRESS.EDU

It is apparent that English musicians were mainly theorists, with few exceptions, up to the time of Dunstable. However, their work must be in no way belittled. It was through their effort during the 14th and 15th centuries, that music became generally accepted as a science. "Sumer in icumen in" had been written long before this period to be sure. It is fairly sound proof of an early 13th century English school of Music which far surpassed the Netherlands School of that same period.

With the work of Dunstable and other early contrapuntists of the same period, Music became a recognized field of study worthy of the efforts of the intellectuals.

Dunstable (c. 1400-1458) was not only a musician, but also a Mathematician, astronomer and authority on geography. As quoted by many authors of his time, Dunstable was without doubt a remarkable personage. He was both well informed on music theory, and an able composer.¹ In England Dunstable was a contemporary of Dufay and Binchois, the Gallo-Belgians. He was the eldest of the three, and therefore many claim him to have been at the head of the new development of the Musical art, that grew and spread so rapidly.

Dunstable's works indicate that he must have been a learned scholar and very cultured gentlemen. Without doubt

1. Frederick Corwest, British Music (1896) p. 321.

he was one of the chief formative influences in the development of Music as an art. The "O Rosa Bella" of Dunstable is said to be quite equal to anything of Dufay's produced some 20 years later.¹ Harmonically he helped rid music of its obnoxious successions of fifths and octaves. The voice parts were simplified and the music displayed a steadier, more effective flow. Fortunately many of his works are available today. Dunstable was the founder of the second School of English Music. From his time forward, as was also true of his European contemporaries Dufay and Binchois, Music made rapid progress as an art in its own right.

Of English music then, we may say that it progressed similarly, possibly more rapidly than that on the continent, but necessarily suffers because of the lack of actual material remaining concerning its development.

1. H. Orsmond Auderton, Early English Music (1920) p. 39.
2. Frederick Crowest, British Music (1896) p. 345.

VII. GALLO-BELGIC SCHOOL

Following the Parisian School and its outgrowth, is the Gallo-Belgic school which grew up in the provinces of Hennegau and Flanders. This conservatoire formed the mental link between the Parisian school and the great Netherlands school to follow. Between 1360 and 1460 this musical center achieved its greatest success. Knowledge disseminated mainly from Tournay, the center of activity. Its earliest masters are for the most part unknown, possible due to their development in the shadow of the French master's fame. However, an invaluable monument to these Gallo-Belgic masters, prior to Dufay, is found in the celebrated Mass of Tournay. Although technically the music, having been written at the end of the 13th century, is no more interesting than that of Pérotin and Jean de Garlande, it is important historically in revealing the intermediate steps in polyphonic writing after the earlier barbarous attempts at part writing.

There are four known composers from this period; Tapssier, Carmen, Cesaris, and Zeelandia, the immediate precursor of Dufay. We have a few facts concerning Zeelandia alone, who apparently flourished in the period elapsing between the Mass of Tournay 1330 and the birth of Dufay 1360. He found particular displeasure in consecutive fourths and fifths and with him this practise practically disappears.

A treatise bearing his name shows Zeelandia to have been a composer of four part chansons and also a teacher of some fame. In his songs, the text of which was mainly Flemish, he gave the theme to the high treble voice, an unusual arrangement at that time.¹

The first composer of whom there is a fairly complete biography is Guillermus Dufay, born in Hainault shortly before 1400. He received his musical education as a chorister at Cambrai. From a letter by Philip of Luxembourg to the Chapter of Cambrai we learn that the musical services there reached a high degree of excellence at that time. Philip speaks of the singing in the Cathedral as surpassing in beauty all heard in Europe. Dufay was appointed to a canonry at Cambrai in November of 1436 and shortly afterwards appointed to a Canonry in the Church of St. Waldtrude at Mons. Both these offices he held until his death. From 1439 to 1446 Dufay also occupied the 24th Prebendary stall in the Cathedral Church of St. Donatus at Bruges. It was probably in 1437 that he went to Savoy, as he left the Papal Chapel in June of that year. Also during that time came his presence at the Court of Burgundy because it is certain that he resided in Cambrai from 1446 on. A temporary visit was paid to Brussels in 1449, and from thence in his capacity of Canon at Waldetrude

1. Emil Naumann, The History of Music (1887) p. 304.

1. The first part of the document is a letter from the President of the United States to the Congress, dated January 3, 1801. It is a very important document, as it contains the President's first message to the Congress, and it is one of the most important documents in the history of the United States.

2. The second part of the document is a letter from the President to the Congress, dated January 3, 1801. It is a very important document, as it contains the President's first message to the Congress, and it is one of the most important documents in the history of the United States.

3. The third part of the document is a letter from the President to the Congress, dated January 3, 1801. It is a very important document, as it contains the President's first message to the Congress, and it is one of the most important documents in the history of the United States.

4. The fourth part of the document is a letter from the President to the Congress, dated January 3, 1801. It is a very important document, as it contains the President's first message to the Congress, and it is one of the most important documents in the history of the United States.

he attended a meeting of the Chapter at Mons. In 1451, the Chapter at Cambrai voted a sum of 60 scuda to Dufay for his works. Also in the records we find that a certain Symon received remuneration for copying into the cathedral music books masses, hymns, and other musical compositions by Dufay. in 1458 apparently he had gained some fame as a musician because while in Besançon an argument arose concerning the mode of a certain antiphon. Dufay stated it to be in mode number II rather than number IV as others asserted, and his decision was accepted. Also, that his reputation was not confined to France is shown in a letter from the Florentine organist Squarcialupi, date May 1, 1467. He speaks of the great esteem in which the works of Dufay were held, not only by himself but also by Pietro and Lorenzo de Medici. On Nov. 27, 1474, Dufay died and was buried as was his wish, in the chapel of St. Etienne.¹

Dufay contributed more than any of his predecessors to the advancement of music as an art. He regarded the various forms in use as vehicles of artistic emotional expressions, not technical exercises as had his predecessors. Dufay was one of the first to turn to secular music for inspiration. The profane melodies lent themselves easily to musical treatment, particularly for the canonic style which demanded simple, recognizable melodic contours and definite rhymical

1. Sir John Stainer, Dufay and his Contemporaries (1898) p.5.

accents, characteristics wholly lacking in ecclesiastical music¹ Dufay and his contemporaries were in deliberate pursuit of euphony for its own sake. Although the results seem to us lacking in energy and vitality, if one remembers what preceded this style, the improvement is obvious. In place of the old cantus firmus a popular melody was sanctioned. The success of this style resulted in all the Gallo-Belgic composers following suit, and secular tunes composed by the people formed, as a rule, the main themes of the mass. In three of Dufay's four part masses, now in the papal chapel library, the melody and text both are popular tunes of that time. The adaptability of popular melodies exemplifies the natural perfection in the development of secular music, contrasted with the artificial compositions of the masters resulting from strict adherence to intellectual rules. Dufay's tonal improvements will always be of major importance. Series of fifths completely disappeared and many awkward harmonic progressions were abandoned. He adopted the "open" note style. The purest style of Canonic writing was that in which the various parts imitated each other in strict form, never descending to the use of the primitive popular Rota, with its endless phrases. In Dufay we find the first beginnings of this style, "interrupted" Canonic part-writing. The imitation does not run through the

1. Cecil Grey, The History of Music (1935) p. 59.

whole composition, but only shows itself here and there.

As previously noted, possibly the most important step of this master and his contemporaries lies in their recognition of the value in euphonic expression. They no longer held themselves helplessly bound to innumerable rules as had their predecessors. Prior to that time, in works of the old French School, music contained no true euphonic expression. It was merely a series of exercises worked out in strict adherence to every known rule. Due praise should be given Dufay for his twofold aim; the development of the contrapuntal science in order to further the possibility of beautiful expression in music. It is of interest to note that music was not the only field to undergo a change in this period. Art made somewhat similar progress led by the Van Eyck brothers, and religious works attained devotional contemplativeness through finer expression.¹

With Dufay the singing range was extended. Whereas the Guidonian scale extended from low G to high E, twenty notes included, Dufay added f, g, a above and D, E, F below. This may have become possible because of the highly trained voices and resulting improved choir singing in his time. Also, Dufay's abler composing may have increased the facility with which higher and lower tones could be taken.²

1. Emil Naumann, The History of Music (1887) p. 303.

2. Sir John Stainer, Dufay and his Contemporaries (1898) p.6.

The first of these is the fact that the law of the land is not a static thing, but a living organism, which grows and changes with the times.

Secondly, the law is not a mere collection of rules and regulations, but a system of principles which guide the conduct of the citizen.

Thirdly, the law is not a mere tool of the government, but a means of securing the rights and liberties of the individual.

Fourthly, the law is not a mere instrument of coercion, but a system of justice which seeks to do right between man and man.

Fifthly, the law is not a mere set of technical rules, but a system of moral principles which govern the conduct of the citizen.

Sixthly, the law is not a mere collection of facts, but a system of reasoning which seeks to establish the truth of the law.

Seventhly, the law is not a mere instrument of power, but a system of justice which seeks to do right between man and man.

Eighthly, the law is not a mere set of technical rules, but a system of moral principles which govern the conduct of the citizen.

Ninthly, the law is not a mere collection of facts, but a system of reasoning which seeks to establish the truth of the law.

Tenthly, the law is not a mere instrument of power, but a system of justice which seeks to do right between man and man.

Eleventhly, the law is not a mere set of technical rules, but a system of moral principles which govern the conduct of the citizen.

Twelfthly, the law is not a mere collection of facts, but a system of reasoning which seeks to establish the truth of the law.

Gille de Binch or Binchois was a contemporary of Dufay and also an accomplished musician. He was named from the town of Bins where he was born in 1400. Although a soldier in early life, in later years he took Holy Orders. Before 1425 he became the Chaplain to Philip of Burgundy, and in 1438 he was presented to a Canonry at St. Waldestrude's in Mons. His name appeared with that of Dufay in the list of non-residents summoned from Brussels to Mons in 1449. Until the time of his death at Lille in 1460, he remained in the service of the Duke of Burgundy.¹

Tinctore says that the name of Binchois should be immortal among composers. Dufay and Binchois were the important masters among the founders of the Gallo-Belgic School. Of Binchois' works only a few of his chansons, motets, and one Mass have been preserved. Before 1482 the fame of Binchois reached Italy, and in that year his works were highly praised by Ramis and Gargoni. Although he was a Belgian and did not travel extensively, his fame was sung by poets of Germany, France and Italy.²

At the half of the 15th Century therefore, we find that the two major components of harmony as an important medium of artistic expression were firmly established and remained only to be further developed along the same lines: the scientific approach to euphonic expression.

1. Sir John Stainer, *Dufay and his Contemporaries* (1898) p.11.

2. Emil Naumann, *The History of Music* (1887) p. 317.

THE UNIVERSITY OF CHICAGO

TO THE PRESIDENT OF THE UNIVERSITY OF CHICAGO
FROM THE FACULTY OF THE DIVISION OF THE PHYSICAL SCIENCES
SUBJECT: A RESOLUTION OF THE FACULTY OF THE DIVISION OF THE PHYSICAL SCIENCES
APPROVED BY THE FACULTY OF THE DIVISION OF THE PHYSICAL SCIENCES
ON MAY 15, 1968

WHEREAS the Faculty of the Division of the Physical Sciences
has considered the report of the Committee on the
Structure of the Division of the Physical Sciences
and has found it to be satisfactory and
has approved the same; and
WHEREAS the Faculty of the Division of the Physical Sciences
has considered the report of the Committee on the
Structure of the Division of the Physical Sciences
and has found it to be satisfactory and
has approved the same; and
WHEREAS the Faculty of the Division of the Physical Sciences
has considered the report of the Committee on the
Structure of the Division of the Physical Sciences
and has found it to be satisfactory and
has approved the same; and

Resolved, That the Faculty of the Division of the Physical Sciences
do hereby approve the report of the Committee on the
Structure of the Division of the Physical Sciences
and do hereby approve the same; and
Resolved, That the Faculty of the Division of the Physical Sciences
do hereby approve the report of the Committee on the
Structure of the Division of the Physical Sciences
and do hereby approve the same; and

IN WITNESS WHEREOF, we have hereunto set our hands and
affixed the seal of the University of Chicago, this 15th day of May, 1968.

PART II.

PART II.

INTRODUCTION

We are now concerned with the actual harmonic development toward an artistic level as it may be traced in original compositions of the old masters. Throughout the analysis of their works, the finished product, modern harmony should be borne in mind. The fact that continual progress was made toward the ideal fulfillment of harmony as previously defined. The important elements to be noted are those which gradually develop into our modern conception of harmony, the tool of a Fine Art. The two essential, inseparable factors are unity and variety which resolve in indissoluble form and content. These do not exist apart from each other. To change the form is to change the content and vice versa. Form is essential in presenting a clear, unconfused impression to the mind, and varied content, or variety evokes and sustains interest. In the greatest works of art these two elements are fused to the finest possible degree in a comprehensible whole. First one and then the other becomes submerged and apparently ignored in the preliminary stages of development as we shall see in the illustrations to follow; certain phases persist however and become more comprehensive in each following example. Rather than considering each illustration in comparison with modern harmony, therefore we shall instead consider each as a stepping stone, in relation to the preceding developments.

The original organum of plain consecutive 4ths and

5ths was in itself a precisely technical form; however it allowed no variety other than melodic. In the introduction of diaphony and discant there was a comparatively great amount of variety in interval, but the form was discarded to a great extent; there being maintained only the form of length of unit or phrase. This amount of form was increased by the doubling or dividing of the phrase at points of rest. A fusion of form and variety resulted by combining the various intervals on a framework of 5ths, this combination requiring, as always concessions in both these elements of art. Whereas these intervals were first used to avoid the monotony of open 5ths, finally, because of their interest they were used to enhance the comparative baldness of the fifth. Their agreeableness increased through constant hearing. Their use began to assimilate some rules, or form. The 6th was used to approach a fifth from an octave or vice versa, thus insinuating itself into the mind as a gradually more normal sound. And so with the other intervals, as their use was accepted and their usefulness recognized, form was broadened and altered to cope with its new ingredient. The interval of a 3rd became prominent because of its mild dissonance when used with the 5th and octave, music's original backbone. It came to be used throughout as a compliment to the 5th and here originated our first harmonic chords. These new intervals, again thru their familiarity and consequent acceptable affect were finally used in short passages free

of the traditional 5ths. This near equality necessitated some rules to combine successfully all these factors to satisfy the natural feeling for form.

As we follow this series of examples it will become apparent how these innovations, unsystematic at first, conformed in part, to a form which in turn conformed to them. Thirds will be found first as incidental passing tones or embellishments, then sometimes on accents, in consecutives, and finally on independent skips. The triads that they ultimately form will be found to be more and more prominently and widely used. Suggestions of 7th chords resulted from a more complicated grouping of thirds, as they built up the repertoire of sounds. As this inception of chords was felt a more coherent tonality was established; their relation to each other strengthened a tonal coherency. A suggestion of cadence form occurred and encouraged the attempt at variation by strongly implying a different key.

In the leading of voices a good deal of imitation was used, thereby impressing a relation of the parts and the unity of the whole. Later this was more pronounced where the imitations included the chord or harmonic progression.

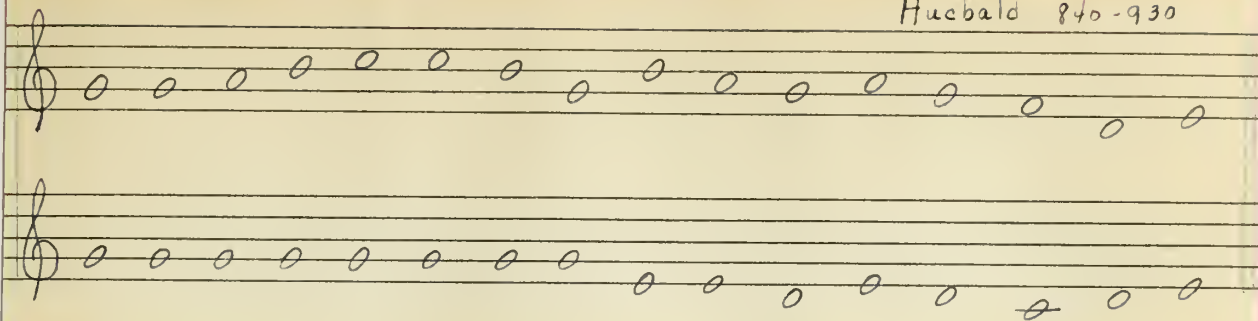
From the original practise of combining a slow and a faster moving melody came the germ of measuring lengths of notes into measures. Thus grew the feeling of rythm, a pronounced factor of form in music. As it grew more complicated and strict it, too, had an element of unity. We find it com-

binning with imitation and chord progression in a finer mingling toward an artistic result.

In these excerpts the theoretical study and deductions of the beginnings of harmony must be made thru an understanding of the significance of these technical details and their bearing on its growth.

For the sake of facility in analysis, the letters a, b, c are used to denote triads in root position, first, and second inversion respectively. The number 7 indicates a 7th chord.

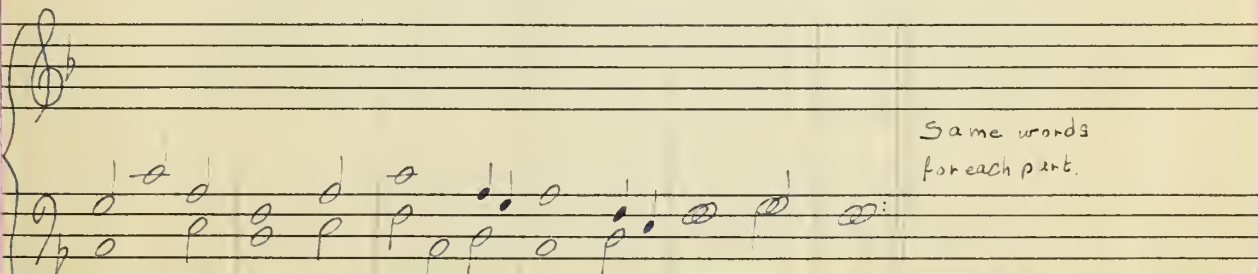
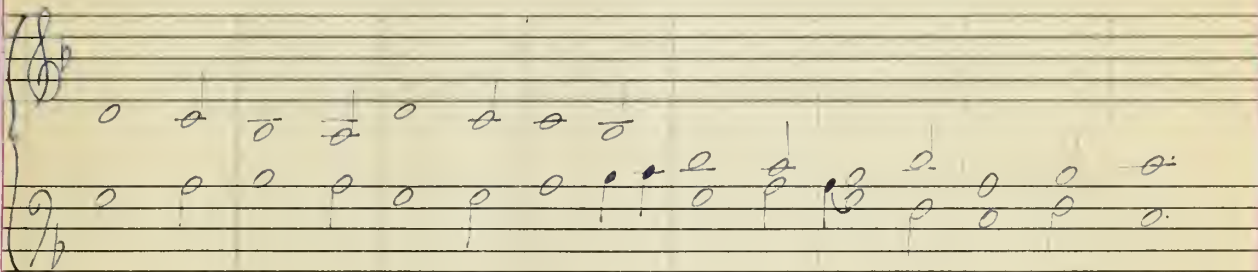
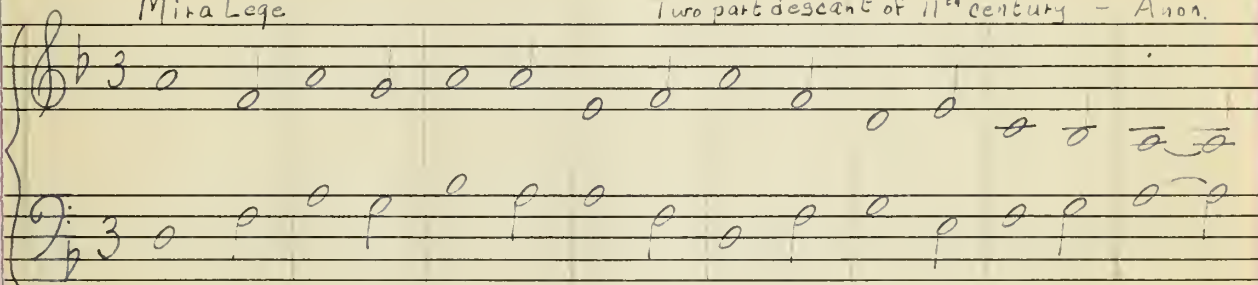
Hucbald 840-930



A. Remarks: two instances of contrary motion; lack of system; uninteresting lower part; unrhythmic; notable improvement in regard to consecutives however.

Mira Lege

Two part descent of 11th century - Anon.

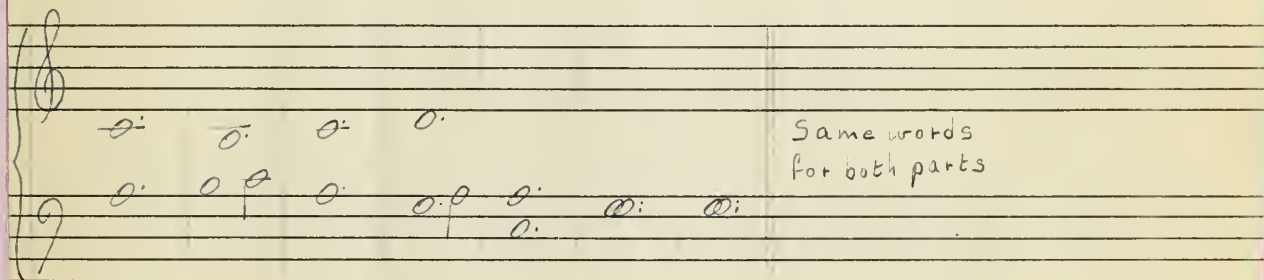
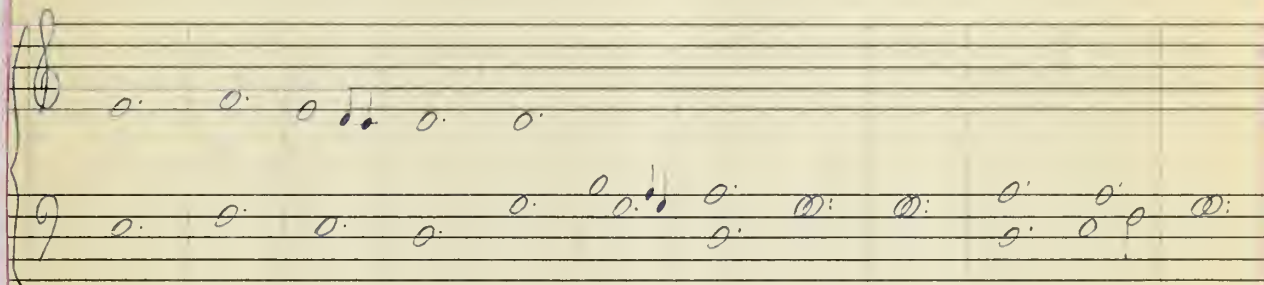
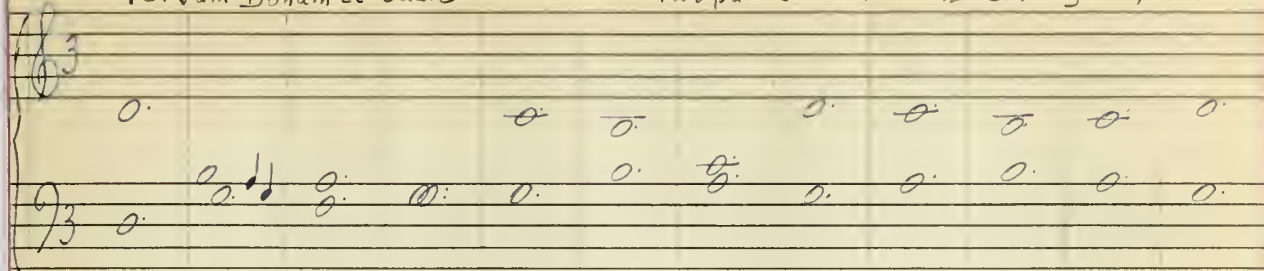


Same words
for each part.

B. Remarks: contrary motion more common, evidence of a systematic approach; parts equally interesting; measured and rhythmic; 5ths and 8vas on main beats with exception of a few 3rds and 6ths, uncertain tonality.

Verbum Bonum et Suave

Two part descant of 12th century - Anon



C. Remarks: Frequent, intended use of contrary motion; repeated figure increases unity; more prominent 3rds; less consecutives; no stronger feeling of tonality evident.



Long le Rien de la Fontaine Two part descant of 12th cent. - Anon.

etc.

Ends on G

Different words for each part

D. Remarks: Increased evidence of system; different words for each part adds rhythmic variety to combination of voices; 3rd, 5th, and unison on main beats; suggestion of short phrases and semi-cadences; little evidence of planned tonality.

Dieu Je ne Puis la Nuit Dormir Three part descant of 12th century Anon.

etc.

Different words for each part

E. Remarks: Advances in two part work lost in first attempts at three part work; syncopation used again; not pleasant to the ear due to frequent use of diminished 5th; interesting to note unintentional, unavoidable chord formation; four suggestions of complete chords.

Handwritten text, likely a title or header, appearing as a series of connected cursive strokes.

Handwritten text, possibly a date or a short phrase, centered below the first line.

Handwritten text at the bottom of the page, appearing as a series of connected cursive strokes.

Gillon Ferrant 12th cent.

c a r

c

etc.

Ends on F

F. Remarks: Added rhythmic part movement within the measure; vague suggestion of phrases; a few completed triads generally discordant due to frequent use of 2nd.

Jehan de la Fontaine 12th cent.

c r c a

c

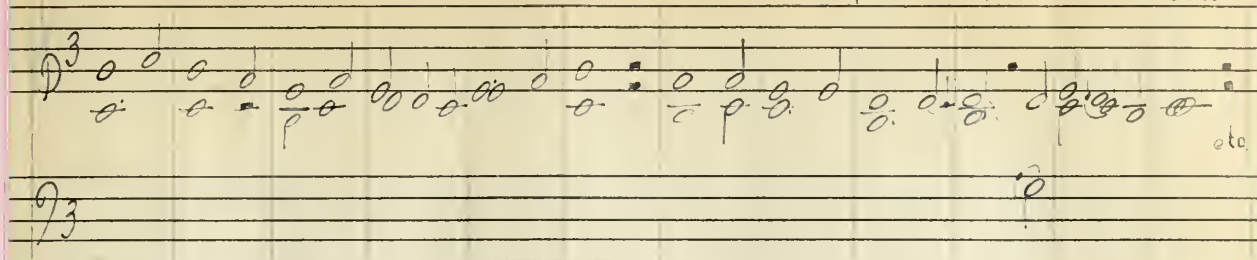
a

c a

etc.

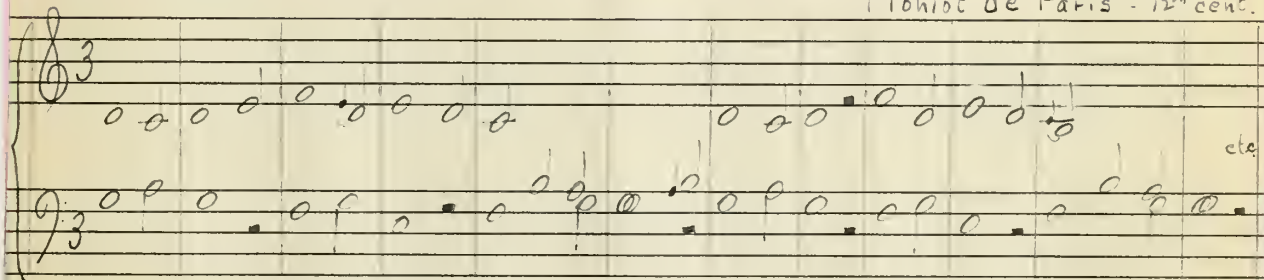
G. Remarks: Rhythmically more interesting; parts move with more care; seconds used less at random so less dissonant; 3rd and 6th still unaccented but full beat intervals; many more completed chords; definite division into four measure phrases.

Moniot d'Arras 12th cent.



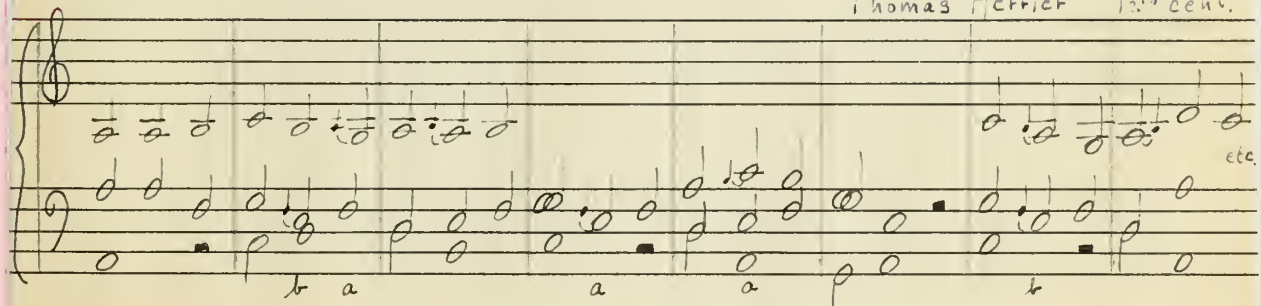
H. Remarks: Two part work interesting for the treatment of the 3rd on an accented beat; equal to the 4th and 5th.

Moniot de Paris - 12th cent.



I. Remarks: Two part work with apparent phrases; harmonically not improved; interesting repeated rhythmic figure in the bass.

Thomas Herrier 12th cent.



J. Remarks: Increased movement of parts in secular numbers resulted in more simultaneously sounded tones and whether intentional or not; by the increased number of tones sounded, they become more prominent and demand more attention as chords; passing tones add variety.



Fines Amourettes Ai

Adam de la Halle

1240

7 a b b b

a a a 7 7 c a a 7 a b

a b b b c

7 b etc

K.¹ Remarks: Increased feeling of form and cadence; the same harmonic progression is repeated three times, being extended to fit words possibly the third time; harmony appears more planned as chords seem to be more systematically employed than previously; consistent, interesting rhythmic pattern; grace notes used freely; Sense of one tonality; secular composition.

Oeuvres Complètes

Adam de la Halle 1240

a b a a a a a b a a a etc

K.2 Remarks: Consecutive 3rds often fill in consec 5ths.

Excerpts

Adam de la Halle 1240

a r a r etc etc

r r etc etc etc

K.3 Remarks: Consecutive 3rds.

Excerpt

Adam de la Halle 1240

Handwritten musical notation for an excerpt by Adam de la Halle. The score is in 3/4 time, featuring a treble and bass staff. The melody in the treble staff consists of eighth and quarter notes, while the bass staff provides a simple accompaniment of quarter notes. The key signature has one flat (B-flat). The notation includes various accidentals and a 'etc.' marking at the end of the first staff.

K.4 Remarks: Consecutive 6ths; 3rds and 6ths used freely by this composer.

Quadruple by Perotin 1140

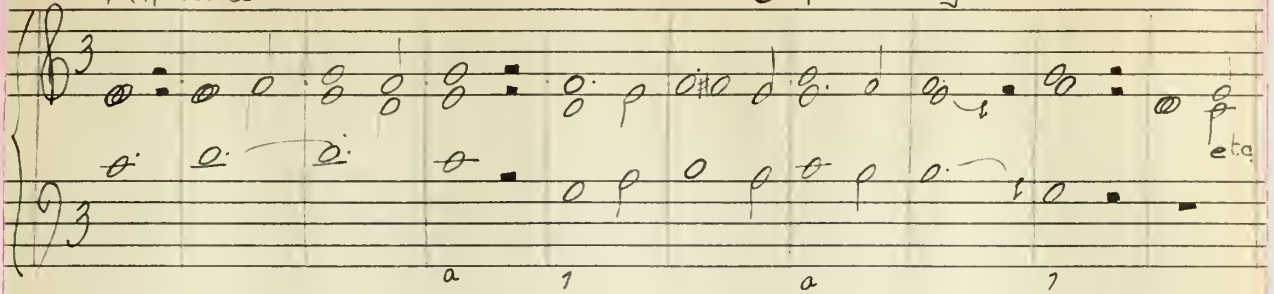
Handwritten musical notation for a quadruple by Perotin. The score is in 3/4 time, featuring a treble and bass staff. The melody in the treble staff consists of quarter and eighth notes, while the bass staff provides a simple accompaniment of quarter notes. The key signature has one flat (B-flat). The notation includes various accidentals and a 'c' marking at the end of the first staff.

Handwritten musical notation for a quadruple by Perotin. The score is in 3/4 time, featuring a treble and bass staff. The melody in the treble staff consists of quarter and eighth notes, while the bass staff provides a simple accompaniment of quarter notes. The key signature has one flat (B-flat). The notation includes various accidentals and a 'c' marking at the end of the first staff.

L.1 Remarks: shows some advancement for religious work. Lacks rhythmic interest and sense of form, 3rds used freely; two long measures before final ending give feeling of preparation for cadence.

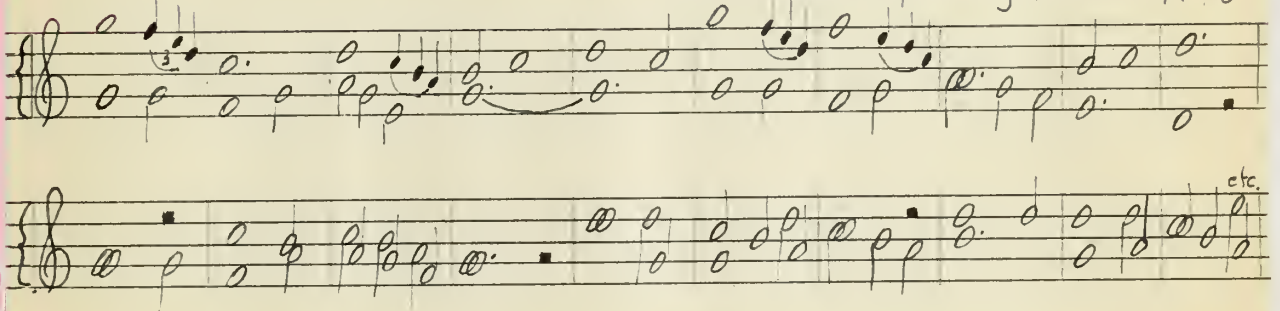
Alleluia

Organum by Perotin 1140



L.2 Remarks: Phrase ending on triad followed by 7th chord.
Phrase ending on 7th chord alone.

Conductus Duplex by Perotin 1140



L.3 Remarks: Wider range between parts.

27 Feb 1945

Dear Mr. [unclear] :

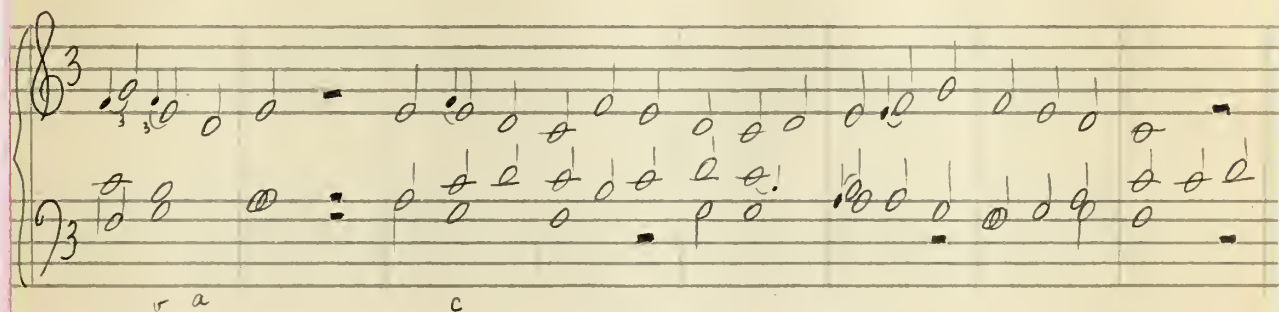
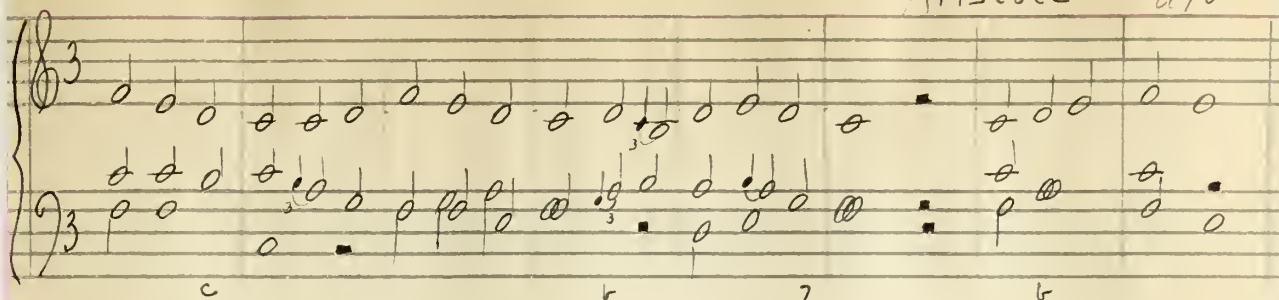
I am sorry that I cannot give you a more definite answer at this time. The matter is still under consideration and I am sure that you will understand the need for a final decision. I will be sure to let you know as soon as a final decision has been reached.

Pierre de la Croix 1170

The image shows two systems of handwritten musical notation on yellowed paper. Each system consists of a treble staff and a bass staff. The first system includes a key signature of one flat (B-flat) and a time signature of 9/8. The notation includes various note values, rests, and accidentals. There are performance markings such as a 'p' (piano) dynamic marking, a '7' with a slur, and an 'a' with a slur. The second system also features similar notation and includes a '7' with a slur and a '7' with a slur. The handwriting is in ink and appears to be from a 19th or 20th-century manuscript.

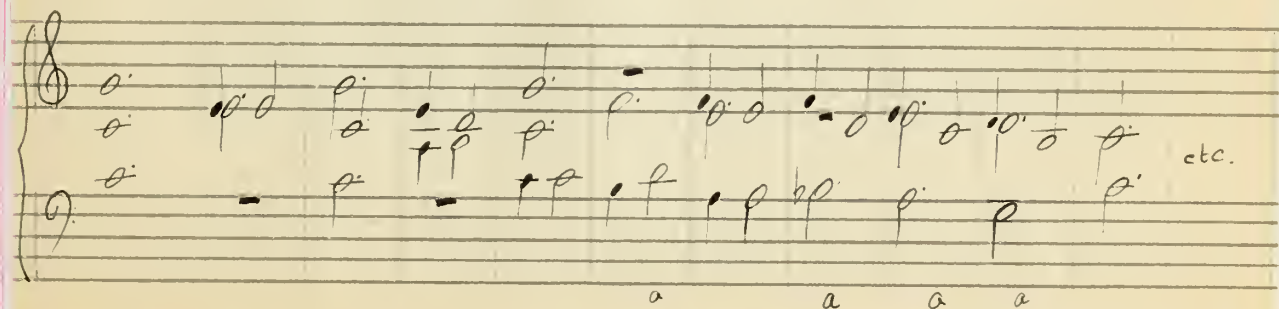
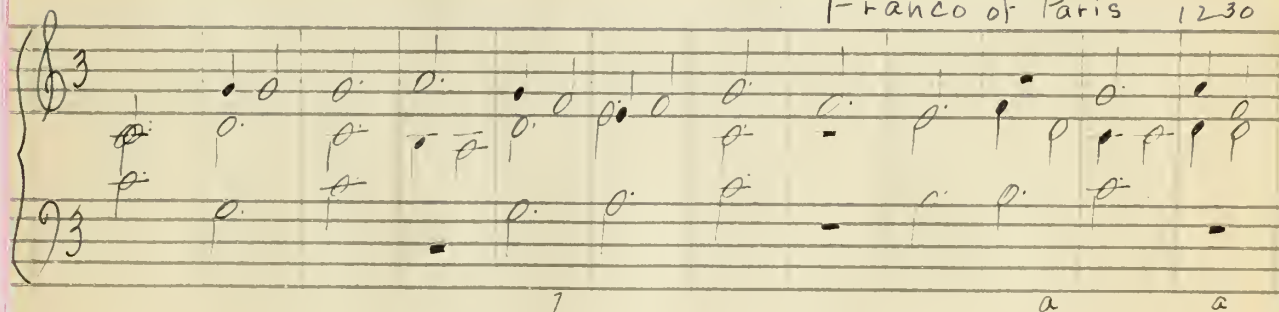
M. Remarks: Still lacking form but different style than preceding example; voice leading gains interest rhythmically and melodically; main structure in 5ths but parts move sufficiently to prevent its being objectionable.

Aristote 1170



N. Remarks: Very little advance but chords still employed.

Franco of Paris 1230



O. Remarks: Free use of syncopation; fairly regular completion of open 5th with 3rd to form triad; definitely accented 3rds; cadence employed at end of phrase.

THE

OF THE

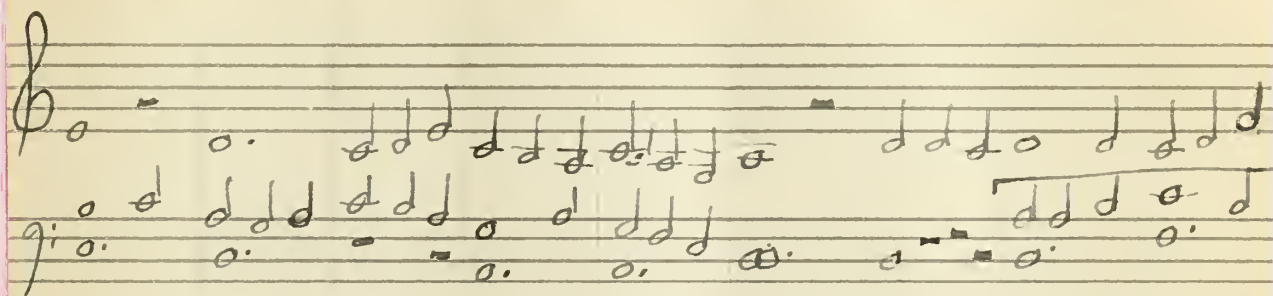
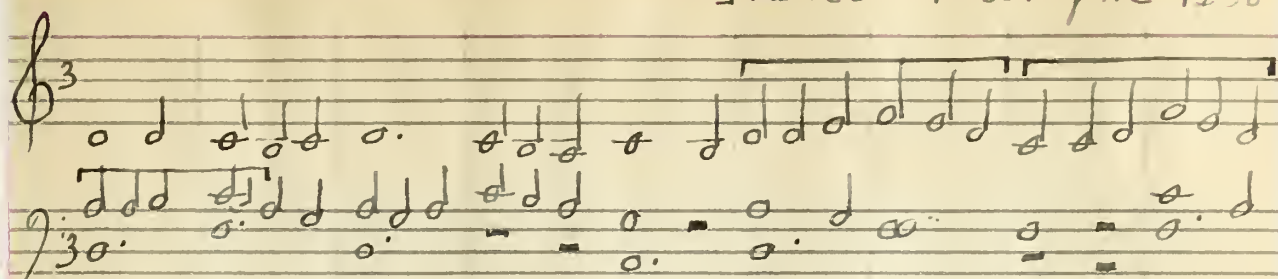
OF THE

OF THE

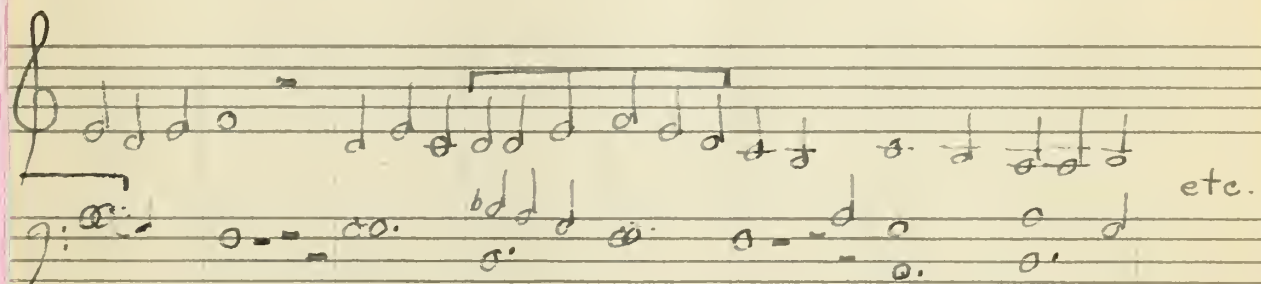
OF THE

OF THE

Franco of Cologne 1230



c a



P. Remarks: Skillfully employed contrary motion; parts move easily and naturally; a more unified whole; chordal progressions smooth rendering whole effect pleasing and harmonious; first example of imitation in various parts.

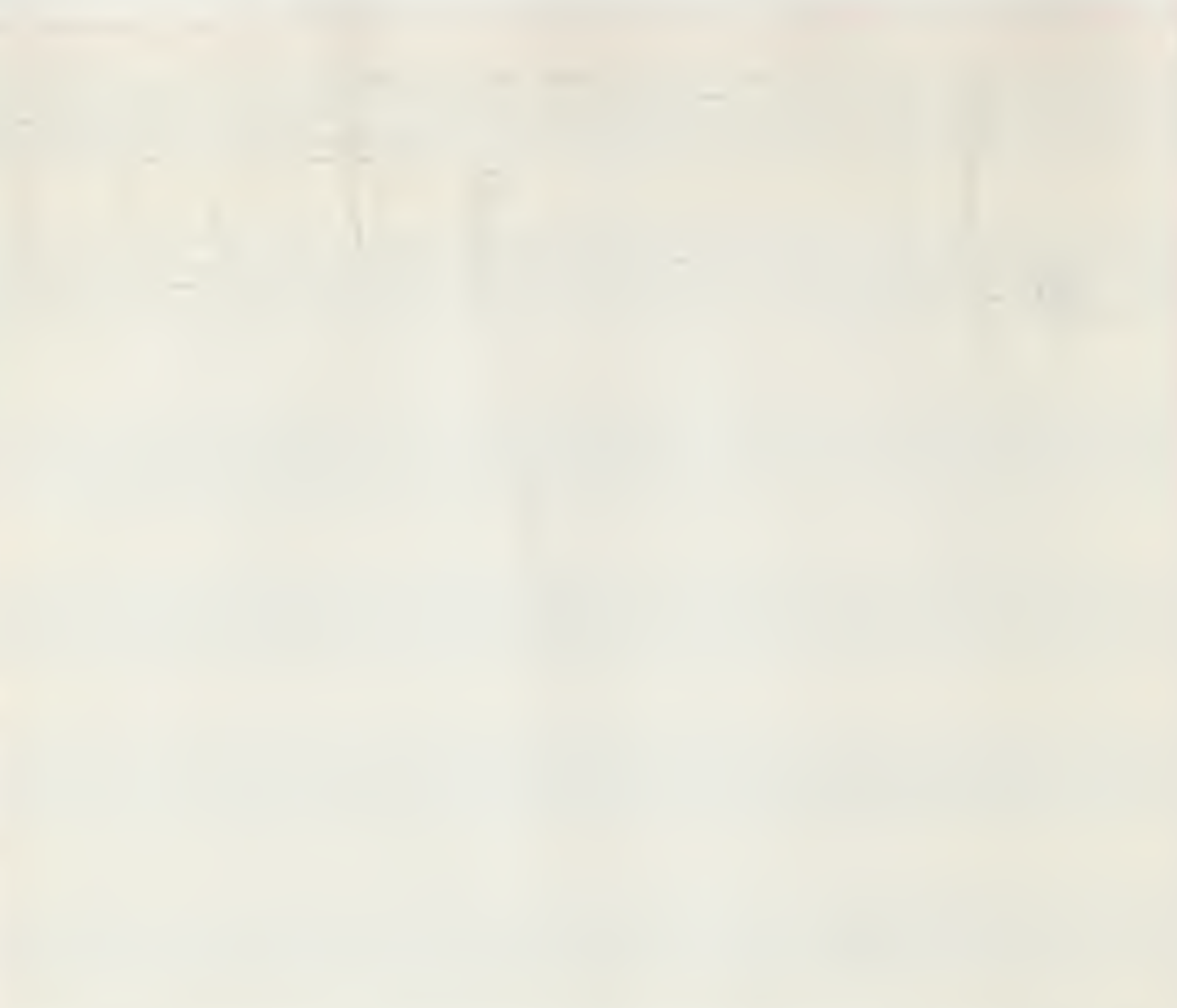
Krebskanon by Marchault 1370

a r a r a r 7 a a 1 1 a

r r a a a 7 r r r a

a c a a r a a r c

Q. Remarks: Definite advancement evident; consistent use of accidentals forming Ionian Mode or our Major scale of D. modern sounding; seems to follow a planned chordal scheme; melody formed to suit this scheme; parts confined to form desired harmonies; not haphazard.



THE UNIVERSITY OF CHICAGO
LIBRARY
540 EAST 57TH STREET
CHICAGO, ILL. 60637
TEL: 773-936-3000
FAX: 773-936-3000
WWW.CHICAGO.EDU

Pour Une Foix

Cardot - 13th Century

Handwritten musical notation for the first system. The top staff is in treble clef with a 3/2 time signature. The bottom staff is in bass clef. The notation includes various note values (minims, crotchets, quavers) and rests. Below the staves, there are rhythmic markings: 'b b b b b' and '7 b 7 b 7 b'.

Handwritten musical notation for the second system. The top staff is in treble clef. The bottom staff is in bass clef. Below the staves, there are rhythmic markings: 'a a a 7 c a 7' and 'b b'.

Handwritten musical notation for the third system. The top staff is in treble clef. The bottom staff is in bass clef. Below the staves, there are rhythmic markings: 'a 7 b c b 7' and '7 7'.

Handwritten musical notation for the fourth system. The top staff is in treble clef. The bottom staff is in bass clef. Below the staves, there are rhythmic markings: '7 b b' and '7 b 7 b 7 b'.

R. Remarks: syncopation over bar line to break monotony of 3/4 meter. Strong and similarly constructed cadences in four keys, well prepared semblance of modulation; absence of unpleasant 2nds throughout; whole phrases without open 5ths; 3rds, 6ths, even 7ths used independent of 5ths; 7ths resolved correctly; 5ths used only at apparent phrase points; first sign of suspensions (resolving 7ths); consecutive triads with common tone suggesting experiments in harmonic coloring.

Pontifici Decori Speculi

Johanes Carmen - 13th century

a r 7 a a a r a 7 r

r a a 7 a a c a r a a r

a a a a a b a b a r a a a

a r r a a r a 7 a 7 a r

S. Remarks: Suggestion of planned arranging of chords by imitation of phrase, with almost identical chord progression formed by varied distribution of notes and leading of parts; no open 5ths sounding more than one beat except at the beginning; occasional 2nds approached and left in contrary or oblique motion, rapid and intricate use of thirds in moving parts; parts moving in chord skips to 3rds and 6ths; simple bass continuing under moving voices, suggesting relation of chords.

Jusque à Tant Que Je Puisse Voir

Charité - 13th Century

The musical score is handwritten on four systems of two staves each. The top staff is in treble clef with a key signature of one sharp (F#) and a 6/4 time signature. The bottom staff is in bass clef with a key signature of one flat (Bb) and a 4/4 time signature. The music features a mix of eighth, quarter, and half notes, with some syncopation. Rhythmic notation is present below the bottom staff, consisting of letters 'a' and 'r' with vertical lines indicating note durations. The score ends with a double bar line and a repeat sign.

T. Remarks: Syncopation more prevalent; use of dotted quarter rhythm diminishes prominence of passing tones; suggestion of anticipation; suggestion of modulation for suspense at phrase ends; apparent raising of leading tone in progression to tonic at phrase end; entrance after phrase rest with 3rd.

Mon Seul Voloir

Cesaris - 13th Century

Handwritten musical score for the first system of 'Mon Seul Voloir'. The score is written on two staves: a treble staff and a bass staff. The treble staff contains a melody with various note values and accidentals. The bass staff contains a supporting line with notes and rests. Below the bass staff, there are several letters: 'c a', 'a', 'r', 'a', 'a', 'a'.

Handwritten musical score for the second system of 'Mon Seul Voloir'. The score continues on two staves. The treble staff has a melody, and the bass staff has a supporting line. Below the bass staff, there are several letters: 'r', 'r', 'a', 'a', 'r', 'r', 'a', 'r', 'a'.

Handwritten musical score for the third system of 'Mon Seul Voloir'. The score continues on two staves. The treble staff has a melody, and the bass staff has a supporting line. Below the bass staff, there are several letters: 'r', 'a', 'a', 'c', 'a', 'r', 'r', 'r'.

Handwritten musical score for the fourth system of 'Mon Seul Voloir'. The score continues on two staves. The treble staff has a melody, and the bass staff has a supporting line. Below the bass staff, there are several letters: 'r', 'c', 'a', 'c', 'r', 'c', 'a', 'r', 'c', 'a', 'c', 'a'.

U. Remarks: First use of independent 8th notes at opening of phrase; more entrances on 3rds; phrases tied together by holding bass tones, imitation, especially at phrase ends; same chord sequence at tonic cadence helps establish one tonality.

Je demande ma bienvenue

Acourt - late 13th Century

Handwritten musical score for 'Je demande ma bienvenue' in 3/2 time. The score consists of two systems. The first system has a treble staff with a melody and a bass staff with a more complex accompaniment. The second system continues the melody and accompaniment. The bass staff includes some numerical figures like '7', 'a', and '9(?)' below the notes.

Continuation of the handwritten musical score from the previous system. It shows the continuation of the melody in the treble staff and the accompaniment in the bass staff.

V. Remarks: Rhythmical scheme carried out in phrases, each ending in a definite cadence; imitated sequence in strong modulation; prominent repetition of the 7th chord; suspension in the bass parts.

Quam Pulchra mes

Dunstable

1400

The musical score is handwritten on three systems of staves. The first system consists of a treble clef staff with a 3/2 time signature and a bass clef staff with a 3/2 time signature. The second system also consists of a treble clef staff and a bass clef staff. The third system consists of a treble clef staff and a bass clef staff. The music is written in a medieval style with square notes. There are various annotations below the staves, including 'a', 'b', and '7'.

W. Remarks: A sense of rhythmic balance; doesn't base phrasing even on skeleton of 5ths; avoids consecutives entirely; rarely leaves open 5th without filling in 3rd of triad implied; three consecutively sounded triads in unchanged position; longer limiting of parts to single triad; distinct feeling of straight chord structure without unharmonious notes; harmonic aspect not controlled by melodic line although melody not good as a result; twelve measures built on harmonization of three chords in various positions.

Excerpt from Ecce Ancilla Mass by Dufay 1400

a b a b 7 b a a b a

a 7 a b a b c a a a

etc

X¹ Remarks: Only occasional open 5th, no consecutive 5ths; Religious music gaining logical harmonic sound; simple directtonality based on few strongly presented chords; repeated use of dominant to tonic progression; doubling of 3rds, not 5ths and 8vas; groups of 4 consecutive thirds; more insistant 7th chords suggestions; rhythm quiet in religious music; no awkward seconds.

Excerpt from Gloria in Excelsis Deo Mass by Dufay 1400

a b a b c a a a

etc

X.² Remarks: Freedom from open 5ths even in part writing.



Excerpt from Kyrie Mass by Dufay 1400

The image shows two systems of handwritten musical notation on aged paper. The first system is titled 'Excerpt from Kyrie' and 'Mass by Dufay' with the year '1400' written to the right. It features a treble and bass staff with a 3/4 time signature. The melody is written in the treble staff, and the bass staff contains a simple harmonic accompaniment. Below the bass staff, the notes 'a a 7 a a r a a a a 7' are written. The second system continues the melody and accompaniment, ending with the word 'etc'.

X.³ Remarks: Again, harmony prominent because of few strong chords; cadences through dominant to complete tonic chord; Ionian mode, modern scale, clearly stated in primary chords; melodic and rhythmic elements in parts comparatively free, considering restrictions of simple harmony and religious influence.



Vergine Bella

Dufay 1360

The musical score is handwritten on three systems of staves. Each system consists of a treble clef staff and a bass clef staff. The music is written in a style characteristic of the 15th century, with a focus on harmonic progression and melodic development. The key signature changes from G major to D major in the first system, back to G major in the second, and back to D major in the third. The score includes various musical notations such as notes, rests, and accidentals. Below the staves, there are handwritten letters 'a', 'b', and 'c' indicating specific intervals or notes.

X.4 Remarks: More rapid and varying secular rhythm resulting in quicker progression of chords -- yet, intricate voice leading does not preclude adherence to harmonic demands; cadential use of intervals 5th to 5th to 8va, (developed and used also in previous examples), indicates appreciation of significance and strength of combined harmonic and melodic scheme to complete phrases; actual canonic structure at beginning; use of 5ths, octaves, and seconds controlled as in religious music (X1, 2, 3)



Vergine Bella 2nd part Dufay 1360

a a a a c

a a a

b a a b c a b b a etc.

X.⁵ Remarks: Careful and clear working of imitation placed more effectively and unencumbered by unharmonic disturbance, possibly an example of "interrupted" canonic part writing; same 6, 5, 8 cadence intervals; imitation of figure in previous example part of same composition in contrasting rhythm aids sense of unity; rhythm of quarter notes, then eighths smoother, not halting as before; more advanced artistic blending of musical elements, melody, harmony, rhythm; each factor interesting, systematic, and artistic in itself, yet inter-related and inter-dependently devised to create a unified whole; attractive to the modern ear in both pleasantness of sound and interest of form.

Nous Vous Verens Bien Malebouche

Binchois 1400

The musical score is written on four systems of two staves each. The top staff is in treble clef with a key signature of one flat (B-flat). The bottom staff is in bass clef with a key signature of one flat (B-flat). The music features a mix of eighth and sixteenth notes, often beamed together, and rests. Below the bottom staff, there are handwritten letters 'a', 'b', 'c', and '7' indicating specific notes or chords. The notation is elegant and typical of early manuscript notation.

Y. Remarks: Advanced sense of form; ends phrases with chords strengthened by VI cadence feeling; finer coordination between melodic and harmonic elements -- neither is secondary to the other; non-harmonic tones placed to avoid destroying chordal sense. More carefully prepared anticipation; 7th chord formed by skip; no consecutives; appoggiaturas as part of the melodic scheme, employed systematically; melodic line and harmonic structure dependent on but not restricted by one another; finer sense of unity in all respects; form, harmony, melody, and rhythm, than in preceding compositions.

DIGEST

DIGEST

In summarizing the first stage of harmonic development we found that its foundation was laid by Greek theoreticians, rather than composers. The science of simultaneous sounds was studied by such men as Pythagoras and his followers. Available knowledge of their actual musical practise is almost completely lacking, mainly limited to references in literary works of famous men such as Plato. Coussemaker states that in the time of Aristotle the intervals of a 4th and a 5th were used but not enjoyed. Later in Plutarch's time, they were more widely accepted however.

After the fall of Greece, Rome was the center of culture in the western world. However the characteristically Roman temperament did not lend itself to the further development of the fine arts. Mainly through the Greek influence was progress made -- the musical art was kept alive however, through public contests for the display of skill.

With the advent of Christianity a fresh interest in music awakened. It proved the perfect medium of expression for religious purposes. Basing his theory on the Greek scale system, St. Ambrose, Bishop of Milan (340-397) established a firm foundation for church music. There were four Ambrosian modes. Under the direction of Pope Gregory (540-604 B.C.) four plagual modes were added to the four Ambrosian modes. He

also perfected the style of chanting which gained world wide recognition and came to be known as the Gregorian chant. This chant was introduced in England by the Venerable Bede and it was soon employed in all English Churches.

The earliest known writers on harmony were Isidor de Seville, Aurretien de Reome, and Cassiodore. They spoke of concordant "symphonies" as being the 8va, 4th, 5th, 8va and 5th, double 8va, 8va and 4th. Although the church developed its chants extensively during the 7th and 8th centuries, little progress was made in music theory, to our knowledge. Harmony such as it was, was allowed in the Papal chapel in the 9th century.

Harmony, as previously defined however, did not actually come into practise until Hucbald introduced diaphony at the end of the 9th century and the beginning of the 10 century. He defines two kinds; one being slightly more advanced, employing two parts with a variety of intervals, and contrary motion allowed. Guido d'Arrezzo who followed made little progress, but the tendency was away from the old consecutive -- 4ths and 5ths. Jean Cotton, a diadactician of the 11th century gives a clear definition of part writing in his time. That considerable progress had been made over the first series of consecutive intervals is easily noted.

At the end of the 11th century, discant, measured part writing, came to the foreground. It was a separate de-

velopment, apart from diaphony, whose origin unfortunately, has not been clearly traced. Franco of Cologne said that discant was the harmonious joining of different melodies adjusted proportionately. Jerome de Moravie (1200 A.D.) wrote a treatise which contains many facts concerning the development of discant. Intervals were classified as consonances and dissonances. Many early composers were revealed upon the discovery of this treatise in the 19th century. Gui de Chalis in the 12th century wrote on discant which shows an advance over the period of Jerome de Moravie. Consecutive 5ths were avoided, and then, up to then dissonant 3rds and 6ths were permitted when used in contrary motion.

Although a great deal of credit is due the ecclesiastics for their accomplishments in the music of the middle ages, there was another factor of almost equal importance, during the same period—early secular music. Each country had its own folk music, freely and naturally developing, subject to no rules. Through the troubadours, trouveres and minnesingers this spontaneous art was cultivated and recorded. The ablest musician among them was Adam de la Hale (1240 A.D.). The secular music was more rhythmic and more freshly appealing than church music. It seems modern in many cases due to their sense of tonality more nearly approaching that of our own. A fresh impulse was given to musical development by their lively, comparatively unrestricted composing.

From the 12th century on, with the French School, music became a recognized field of study. There were many composers belonging to the French School, which contributed more to musical progress than any other faction up to that time. The main development was made in the technical field: the resources of notation increased, greater rhythmic freedom was introduced, many voices became more nearly independent and were handled with greater facility. However, displays of technical skill was over done in such things as thirty voiced motets; singers took too great liberties in the embellishment of melodies; and therefore the French School rapidly declined after Machault around 1360.

During the interim between the fall of the French School, and the rise of the Gallo-Belgic School to follow, there are some composers worthy of note. They might be called the predecessors of the Gallo-Belgic School, by them music still progressed despite its degeneration to mere technical problems by the French masters.

To our knowledge, England contributed little to harmonic development. Material is almost completely lacking concerning its first period. The Reading rota "Sumer is icumen in" is a remarkably artistic composition for its time, but as it was apparently unnoticed by its contemporaries and had no affect on harmonic development, we have not included it in the musical examples. It is rather interesting as an odd piece to be

speculated about and may be found in Grove's Musical dictionary, or Naumann's "History of Music". English musicians were mainly theoreticians up to the time of Dunstable (1400 A.D.), a contemporary of Dufay and Binchois. Many of Dunstable's works have been compared with Dufay's in beauty of affect and harmonic skill.

With these three composers music began to establish its rightful place among the arts. They added to the French technical proficiency, euphonic expression. Although seemingly very simple, their music was an attempt at artistic composing through a systematic, yet varied medium of expression. The preliminary experimental stage of development had been conquered and artistic musical composing began with Dunstable and the Gallo-Belgic masters.

In order to have a comprehensive understanding of the beginnings of harmony, the actual examples of this period of composition have been carefully analyzed, and considered apart from the historical development.

BIBLIOGRAPHY

- Auderton, H. Orsmond, Early English Music, London, "Musical Opinion" 1920.
- Art of Music, Mason, New York, National Society of Music, 1915, Vol. I and II.
- Aubry Vitet, Pierre J., Trouveres and Troubadours, New York, Schirmer, 1914.
- Ausgabe, Kallmeyer, Chorwerk, Das. Wolfenbuttel, Berlin, 1929-34, Mr. 36.
- Baker's Biographical Dictionary of Musicians, Remy, Alfred, New York, G. Schirmer Inc., 1940.
- Barrett, William A., Eng. glees and part songs., London, Longmans, G. & Co., 1886.
- Bauer, Marion & Peyser, Ethel, Music Through the Ages, New York, Putnam, 1939.
- Beck, Johann Baptist, Les Chansonniers des troubadours et des trouveres, Philadelphia, The University of Philadelphia Press, 1927.
- Bird, Joseph, Gleanings from The History of Music, Boston, Benjamin B. Mussey & Co., 1850.
- Coussemaker, Charles Edmond, Histoire de l'harmonie au moyen age, Paris: Vo Didron, 1852.
- Coussemaker, Charles Edmond, L'Art Harmonique aux XII^e et XIII^e siecles, Paris, Durand, 1865.
- Coussemaker, Charles Edmond, Oeuvres Completes, Adam de la Hale, Paris: Durand & Pedone-Lauriel, 1872.
- Crowest, Frederick James, The Story of British Music, London, Bentley, 1896.
- Dickinson, Clarence, Troubadour Songs: New York, The H. W. Gray Co., 1920.
- Dickinson, Edward, Musin in the History of the Western Church, New York, Scribner, 1902.

APPENDIX

TABLE I. Summary of the data used in the analysis.

The data were collected from the following sources:

1. Publicly available data (e.g., OpenStreetMap)

2. Proprietary data (e.g., Google Maps)

3. Survey data (e.g., Google Street View)

4. Other data (e.g., Google Earth)

5. Other data (e.g., Google Earth)

6. Other data (e.g., Google Earth)

7. Other data (e.g., Google Earth)

8. Other data (e.g., Google Earth)

9. Other data (e.g., Google Earth)

10. Other data (e.g., Google Earth)

11. Other data (e.g., Google Earth)

12. Other data (e.g., Google Earth)

13. Other data (e.g., Google Earth)

14. Other data (e.g., Google Earth)

Dufay, Guillaume, C. Wolf geistliche und Weltliche Werke Zu
3 stimmen fur Singstimmen und Instruments. Heinrich
Besseler, Wolfenbittel, Kallmeyer, 1932.

Encyclopedia Britannica, New York: The Encyclopedia
Britannica Co., 11th edition, 1910.

Ficker, Rudolph, Denkmäler der Tonkunst in Österreich, Wien,
Universal Edition A. G., 1924.

Ficker, Rudolph, und Orel, Alfred Denkmäler der Tonkunst in
Österreich, Wien, Universal Edition A.G., 1920.

Grey, Cecil, The History of Music, New York, Albert a Knopf,
1935.

Grove's Dictionary of Music and Musicians, Grove, Sir George,
London, The MacMillan Co., 1879-89.

Gurlitt, Wilibald; Gilles Binchois, Wolfenbittel, Berlin, 1933.

International Cyclopedia of Music and Musicians, Thompson,
Oscar, New York, Dodd, Mead & Co., 1939.

Lavignac, Albert, Music and Musicians, New York, Holt & Co.,
1899.

MacMillan Encyclopedia of Music and Musicians, Wier, Albert E.,
New York, MacMillan Co., 1938.

Monmerque, L. J. N. D. & Michel, F. X., Theatre françois au
Moyen Age, Paris, 1839.

Naumann, Emil R., The History of Music, Sir F. A. Gore Ouseley,
London, Cassell & Co., 1887.

Oxford Companion to Music, Scholes, Percy A., London, New York,
Oxford University Press, 1938.

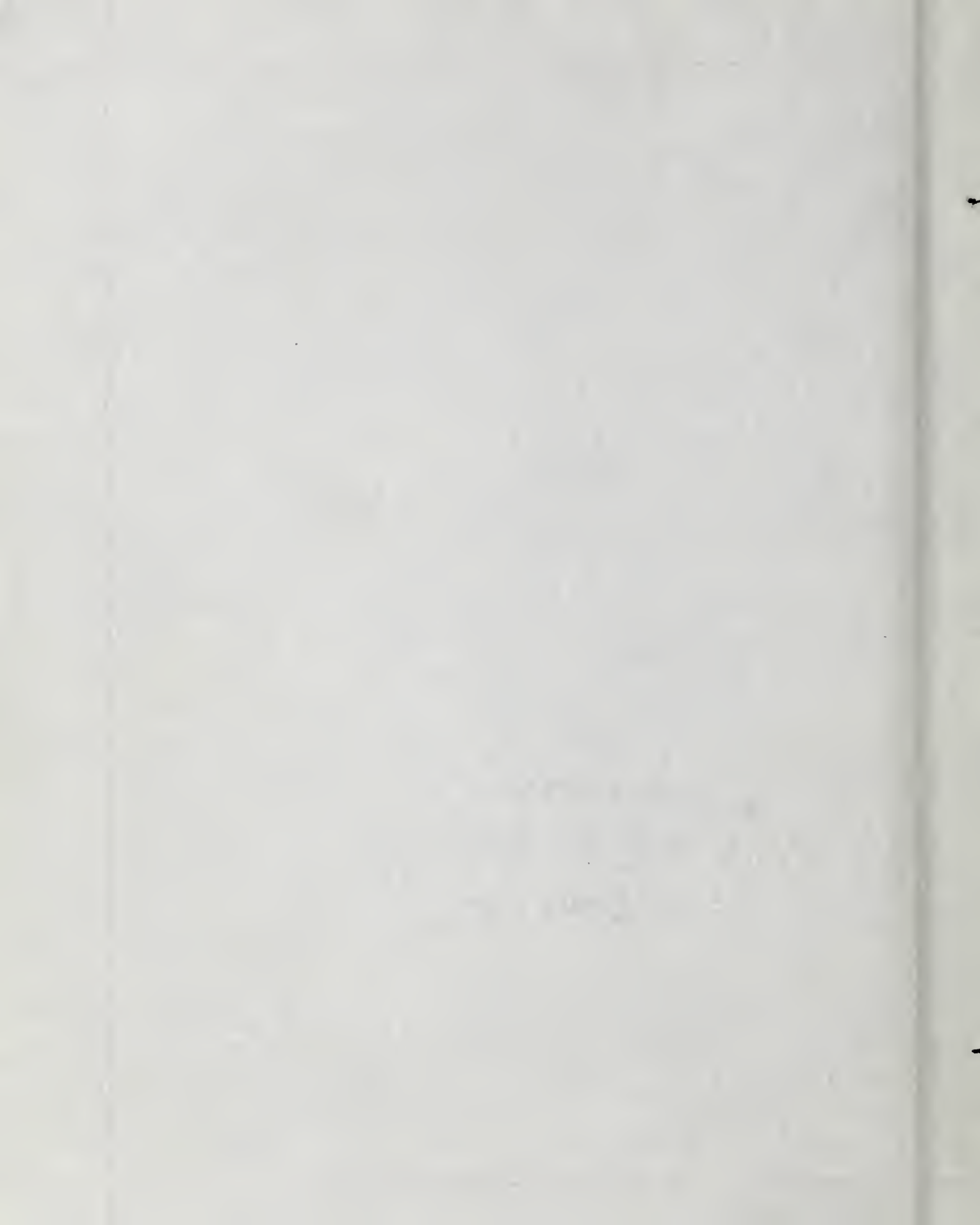
Oxford History of Music, Hadou, Sir William H. Oxford, The
Clarendon Press, 1901-05, Vol. I.

Plainsong and mediaeval music society, A collection of songs
and Madrigals of English composers at the close of the
15th Century, London, B. Quaritch, 1891.

Pratt, Waldo Seldon, The History of Music, New York, G. Schirmer,
Inc., 1935.

Ritter, Frederick L., The Students History of Music,, Boston, 1883.

Stainer, C., & Sir John, Dufay and his contemporaries., London,
Novello & Co., 1898.



BOSTON UNIVERSITY



1 1719 02478 2650

